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MICHIGAN

A Guide to the Wolverine State

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MICHIGAN

A GUIDE TO THE WOLVERINE STATE

*Compiled by workers of the Writers' Program
(of the Work Projects Administration in the
State of) Michigan*

AMERICAN GUIDE SERIES

ILLUSTRATED

Sponsored by the Michigan State Administrative Board

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ABNER E. LARNED, *State Administrator*

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Introduction

The Michigan Guide prepared by the Michigan Writers' Project is a creditable achievement.

It will provide both the tourist and the citizen of Michigan with interesting information about the State's highways and bypaths as well as a succinct account of its historical background and its many-sided development in modern times.

But its significance exceeds its intrinsic merits as a work of reference, for its compilation has given employment to needy persons who have thus been able to maintain their skills unimpaired, in anticipation of the day when they will return to private employment.

ABNER E. LARNED
State Administrator

Foreword

The Guide Book Series is a notable contribution to the body of knowledge about contemporary America. This monumental work could have been built only by the Writers' Program of the Work Projects Administration. It could scarcely have been undertaken by any publisher or group of commercial publishers in America.

But to me the Guide Book Series means more than the appearance of so many useful and interesting finger posts for my own American journey. This service is far transcended by what the great literary teamwork on the guides has meant to, has done for, the workers who built them.

What has this unprecedented, this truly unique collective effort done for its army of writers?

This is what sets the present collaboration off from collective works such as those of the Encyclopædia Britannica or Hastings Cyclopedia of Religion and Ethics. These great and useful works were compiled by learned men, professors, working in the cozy security of their various academic grooves and groves. To this well-fed collective learning, the present teamwork of forgotten men—slightly frayed and sometimes hungry—makes a contrast.

It has been an improvised, a homespun, an amateur epic. Their skills were highly variable. In some cases, their tools for acquiring information were deplorable. They had stubs of pencils and cheap waste paper to make notes upon. They had no automobiles, no paid transportation, but in many instances—thinly clothed and with belts pulled in—they thumbed their way to their rendezvous with their source materials. In this project, these new encyclopedists have all been learners. And the learners have completed their work—surprised to find themselves now encyclopedists.

To the charges that they are boondogglers and pencil-leaners, this band of writers, chins up, can point to their guide book—in the hands of their detractors using the book—and can say: We, working Americans, have built these signboards for you.

PAUL DE KRUIF

Preface

Michigan: A Guide to the Wolverine State was all but ready for the printer before I assumed titular leadership of the Michigan Writers' Project. The amazingly comprehensive research had been done long before, the task of determining what to write, and then writing it, was accomplished, the intricate editing completed. So, even though I sit at this supervisor's desk, I am but a bystander in the matter of the *Guide*. An applauding bystander, however, because there is more of my native State in these pages than has ever appeared between covers before.

Many persons have contributed, by suggestion and advice, to the success of this undertaking. Among these, the record shows, we must mention particularly Dr. Randolph G. Adams and staff of the William Clements Library; Elizabeth Adams, Henry D. Brown, Lew A. Chase, A. B. Christiansen, Harold M. Dorr, Professor James Fisher, Hugh Gray, Dr. William Haber, Dr. Wilbert Hinsdale, Dr. Russell Hussey, James W. Lee, Professor Emil Lorch, who wrote the essay, 'The Development of Architecture,' C. W. Lucas, T. F. Marston, Stanley D. Newton, C. A. Paquin, Howard Peckham, Edgar P. Richardson of the Detroit Institute of Arts, Wilfred B. Shaw, and Professor Ivan H. Walton, who wrote the essay, 'Marine Lore.'

The Michigan Writers would gratefully name all the other individuals who helped them in their work, but, in this limited space, we may only indicate the numerous sources of information, advice, and assistance. Among these are the various State and Governmental departments and agencies, the schools, colleges, and churches of Michigan, the newspapers, chambers of commerce, industrial organizations and companies, and the many cultural, historical, and social groups and associations of every community. We are indebted to the Michigan Arts and Crafts Project for the art work used in the *Guide*.

As the *Guide* went to press before the 1940 census figures were available, the 1930 figures were used throughout the text. There is, however, an alphabetical list of the final 1940 figures in the *Appendices*.

X P R E F A C E

In presenting material so detailed as is contained in this *Guide*, there is a natural probability of error. If the reader will report any errors detected, corrections will be made for future editions.

HAROLD TITUS, *State Supervisor,*
Michigan Writers' Project.

Contents

INTRODUCTION, By Abner E. Larned, <i>State Administrator</i>	v
FOREWORD, By Paul de Kruif	vii
PREFACE	ix
GENERAL INFORMATION	xxi
CALENDAR OF ANNUAL EVENTS	xxxiii

Part I. The General Background

CONTEMPORARY SCENE	3
NATURAL SETTING	13
ARCHEOLOGY AND INDIANS	24
HISTORY AND GOVERNMENT	34
STATE DEVELOPMENT	55
CONSERVATION AND RECREATION	82
SOCIAL INSTITUTIONS	89
RACIAL ELEMENTS	103
MARINE LORE, By Ivan H. Walton	113
ARTISTS AND CRAFTSMEN	135
LITERATURE	145
MUSIC	152
THE THEATER	157
THE DEVELOPMENT OF ARCHITECTURE, By Emil Lorch	164

Part II. Cities

ANN ARBOR	177
BATTLE CREEK	192
BAY CITY	198
BENTON HARBOR AND ST. JOSEPH	204
DEARBORN	211
DETROIT	228

xii CONTENTS

FLINT	296
GRAND RAPIDS	305
HOLLAND	316
KALAMAZOO	321
LANSING AND EAST LANSING	328
MARQUETTE	343
MUSKEGON	350
PORT HURON	359
SAGINAW	365
SAULT STE. MARIE	372
ST. IGNACE	380

Part III. Tours

TOUR 1	Detroit—Ypsilanti—Coldwater—Sturgis—Niles [US 112]	387
TOUR 2	Detroit—Ann Arbor—Jackson—Battle Creek—Kalamazoo— Benton Harbor—New Buffalo—(Michigan City, Ind.) [US 12]	399
	Section a. Detroit to Jackson	399
	Section b. Jackson to Kalamazoo	401
	Section c. Kalamazoo to Indiana Line	405
TOUR 3	Jackson—Three Rivers—Niles—New Buffalo [State 60]	408
TOUR 4	Detroit—Lansing—Grand Rapids—Grand Haven [US 16]	413
	Section a. Detroit to Lansing	413
	Section b. Lansing to Grand Haven	419
TOUR 5	Detroit—Pontiac—Flint—Saginaw—Clare—Reed City—Lud- ington [US 10]	423
	Section a. Detroit to Saginaw	423
	Section b. Saginaw to Clare	430
	Section c. Clare to Ludington	433
TOUR 5A	Junction with US 10—Cranbrook Foundation [Lone Pine Road]	435
TOUR 6	Port Huron—Flint—Grand Rapids—Holland [State 21]	439
	Section a. Port Huron to Flint	439
	Section b. Flint to Holland	441
TOUR 7	Port Sanilac—Saginaw—St. Louis—Howard City—Muskegon [State 46]	444
	Section a. Port Sanilac to Saginaw	444
	Section b. Saginaw to Muskegon	445

TOUR 8	Marysville—Marine City—New Baltimore—Junction with US 25 [State 29]	448
TOUR 9	Bay City—Port Austin—Port Huron—Detroit—(Toledo, Ohio) [State 25, US 25]	454
	Section a. Bay City to Port Huron	454
	Section b. Port Huron to Detroit	459
	Section c. Detroit to Ohio Line	460
TOUR 9A	Junction with US 25—Grosse Pointe—Detroit [Base Line Highway, Vernier Road, E. Jefferson Ave.]	463
TOUR 9B	Detroit—River Rouge—Ecorse—Wyandotte—Trenton—Grosse Ile [W. Jefferson Ave., Van Horn Road]	466
TOUR 10	Port Austin—Bad Axe—Imlay City—Romeo—Detroit [State 53]	475
TOUR 11	Mackinaw City—Cheboygan—Alpena—Bay City—Flint—Ann Arbor—(Toledo, Ohio) [US 23]	480
	Section a. Mackinaw City to Bay City	481
	Section b. Bay City to Ohio Line	489
TOUR 12	Cheboygan—Grayling—Clare—Lansing—Coldwater—(Angola, Ind.) [US 27]	491
	Section a. Cheboygan to Clare	492
	Section b. Clare to Lansing	498
	Section c. Lansing to Indiana Line	500
TOUR 13	Lansing—Jackson—(Bryan, Ohio) [US 127]	503
	Section a. Lansing to Jackson	503
	Section b. Jackson to Ohio Line	507
TOUR 14	Petoskey—Cadillac—Big Rapids—Grand Rapids—Kalamazoo—Three Rivers—(Elkhart, Ind.) [State 131, US 131]	508
	Section a. Petoskey to Grand Rapids	508
	Section b. Grand Rapids to Kalamazoo	513
	Section c. Kalamazoo to Indiana Line	514
TOUR 15	Mackinaw City—Traverse City—Muskegon—Holland—Benton Harbor—Niles—(South Bend, Ind.) [US 31]	515
	Section a. Mackinaw City to Traverse City	516
	Section b. Traverse City to Muskegon	523
	Section c. Muskegon to Indiana Line	527
TOUR 15A	Traverse City—Northport—Leland—Glen Haven—Frankfort—Junction with US 31 [State 22]	530
TOUR 16	Sault Ste. Marie—St. Ignace—Manistique—Gladstone—Iron Mountain—Ironwood—(Hurley, Wis.) [US 2]	535
	Section a. Sault Ste. Marie to St. Ignace	535
	Section b. St. Ignace to Iron Mountain	537
	Section c. Iron Mountain to Wisconsin Line	546

xiv CONTENTS

TOUR 17	Sault Ste. Marie—Drummond Island—Cedarville—Junction with US 2 [State 5, State 4]	551
TOUR 18	Sault Ste. Marie—Seney—Munising—Marquette—Negaunee— Wakefield [State 28]	556
	Section a. Sault Ste. Marie to Negaunee	556
	Section b. Negaunee to Wakefield	564
TOUR 18A	Junction with State 28—Eckerman—Whitefish Point [State 123]	568
TOUR 18B	Munising—Grand Island—Pictured Rocks—Sullivan's Landing [By boat on Lake Superior]	570
TOUR 19	Negaunee—Gladstone—Escanaba—Menominee—(Marinette, Wis.) [State 35]	575
	Section a. Negaunee to Escanaba	575
	Section b. Escanaba to Wisconsin Line	578
TOUR 20	Copper Harbor—Calumet—Houghton—Bruce Crossing— Watersmeet—(Land O'Lakes, Wis.) [State 26, US 45]	581
TOUR 20A	Houghton—L'Anse—Skanee—Huron Mountains [US 41, State 35]	594
TOUR 20B	Junction State 26 and US 45—Rockland—Ontonagon—Porcu- pine Mountains [US 45, State 64, State 107]	597
BEAVER ISLAND		601
	Foot Tour. St. James and environs	606
	Motor Tour. King's Highway	607
ISLE ROYALE		610
MACKINAC ISLAND		615
	Carriage Tour. Mackinac Island City—Fort Mackinac—British Landing—Mackinac Island City [The Combination Drive]	620
	Foot Tour. Mackinac Island City—Astor House—Boardwalk— Mackinac Island City	623

Part IV. Appendices

CHRONOLOGY	629
BIBLIOGRAPHY	645
1940 CENSUS FIGURES	655
INDEX	

Illustrations

A STATE IN THE MAKING

Between 58 and 59

The Capitol, Lansing
Michilimackinac (Fort Mackinac) in 1850
Fort Pontchartrain (Detroit) in 1705
Old Astor Fur Post, Grand Island
Astor House, Fort Mackinac (from an old photograph)
The University of Michigan in the Sixties
Last Run of a Horse-Drawn Fire Engine in Detroit
Mission Church, Mackinac Island
The Lumberman's Memorial, Iosco County
A 'Katydid'—A Contrivance Used for Hauling Logs (c. 1890)
Load of White Pine Logs on Sled (c. 1890)
Home of Governor Henry B. Baldwin, Detroit

THE GREAT LAKES: I

Between 120 and 121

Mackinac Island
Lake Superior Shore, Keweenaw County
Skiing on Sand Dunes
US 2 along Lake Michigan's Shore
Paraleaon Beach on Lake Huron, near Bay City
Sunset on Lake Michigan
Sailing on Lake St. Clair
Yacht Basin, Belle Isle, in the Detroit River
Ice Fishermen's Quarters on Lake St. Clair
Slabs of Frozen Smelts
Smelt Dipping, Menominee
Mending Nets
Checking a Traveling Dune
Juniper Orchard

THE GREAT LAKES: II

Between 214 and 215

Breaking through the Ice Jams, Straits of Mackinaw
Locks at the 'Soo' Sainte Marie
Freighter in a 'Soo' Sainte Marie Lock
Ferrying Automobile Traffic from Upper to Lower Peninsula
through Straits of Mackinac
Unloading Iron Ore at River Rouge Automobile Plant
Great Lakes Freighter Unloading Coal
Loading Iron Ore into Bulk Freighter at Marquette
Large Ore Carrier on the St. Clair River
Loading a Lake Freighter
Detroit-Windsor (Canada) International Tunnel
Ambassador Bridge, Detroit
Blue Water Bridge over St. Clair River
Presque Isle Lighthouse, Lake Huron

ART, EDUCATION, AND SCIENCE

Between 244 and 245

Orpheus Fountain, Cranbrook
Angell Hall, University of Michigan
Law Club and Men's Dormitory, University of Michigan
Hill Auditorium, University of Michigan
Edison Institute Museum, Dearborn
Thomas Edison's Laboratory, Dearborn
Furniture Craftsman at Work, Grand Rapids
Institute of Science, Cranbrook
Boys' School, Cranbrook
Student Visitors at Detroit Institute of Arts
Modern Residence, Midland
Airview, Marygrove College, Detroit

THE AUTOMOBILE INDUSTRY

Between 338 and 339

Automobile Plant
Master Layout Board in an Automobile Factory
Nerve Center
Planning a New Car
Fender Stamping Press
Assembling Drive Shaft Units

Machine Line
 Stamping One-piece Top
 Down She Comes!
 Okay! Drive It Away
 The 'Torture Track'
 Workmen Crossing the Ford Overpass
 Workmen Leaving Plant at End of Day's Work

IN THE CITIES AND TOWNS

Between 432 and 433

Grand Circus Park and Washington Boulevard, Detroit
 Detroit Skyline
 Downtown Detroit in 1895
 The Fisher Building, Detroit
 Michigan Avenue, Lansing—State Capitol in Background
 Airview, Parkside Housing Project
 East Genesee Street, Saginaw
 Saginaw Street, Flint
 Concert at National Music Camp, Interlochen
 Citizens Scrubbing Streets of Holland—Annual Tulip Festival
 Blacksmith at House of David, Benton Harbor
 Breakey Town House, Ypsilanti
 Art Gallery (Pike House), Grand Rapids

THE FARMLANDS

Between 526 and 527

The Farm
 Typical Farmstead
 In the Orchard Country near Benton Harbor
 Cherry Pickers, Traverse City
 In a Cherry Canning Plant, Sodus
 Tulips in Bloom
 Wheat Field
 Harvesting Celery, Kalamazoo
 Sugar Beets at Refinery
 Threshing
 Guernsey Cows in Sudan Grass Pasture, Kalamazoo County
 Feeding the Pigs
 An Auction at Clare Stock Yards
 Crossroads Store
 Public Market, Grand Rapids

IN THE FORESTS

Between 620 and 621

Trail through Hartwick Pines State Park
Pictured Rocks near Munising, Shore of Lake Superior
Tahquamenon Falls, Luce County
Au Sable River, Huron National Forest
Au Train Falls
Bull Moose
Beaver Dam at Head of Maple River
Beaver
Young Buck Feeding
'Bruin'
Workings of an Iron Mine in the Upper Peninsula
Quarry of an Upper Peninsula Iron Mine
Lumberman's Shack
At the Sawmill
Ludington State Park
Ski Jump at the Kingsford Slide

Maps

TOUR MAP	<i>front end paper</i>
UNIVERSITY OF MICHIGAN CAMPUS	185
ANN ARBOR	189
BATTLE CREEK	196
BAY CITY	202
FLINT	301
GRAND RAPIDS AND VICINITY	308 and 309
KALAMAZOO	325
LANSING AND VICINITY	334 and 335
MUSKEGON	354 and 355
PORT HURON	363
SAGINAW	368
SAULT STE. MARIE	377

General Information

Railroads: Upper Peninsula: Copper Range R.R. (CR); Escanaba & Lake Superior R.R. (E&LS); Mineral Range R.R. (MR); Duluth, South Shore & Atlantic Ry. (South Shore); Manistique & Lake Superior R.R. (M&LS); Lake Superior and Ishpeming R.R. (LS&I); Chicago & Northwestern Ry. (Northwestern); Chicago, Milwaukee, St. Paul & Pacific R.R. (Milwaukee); Minneapolis, St. Paul & Sault Ste. Marie Ry. (Soo Line). Lower Peninsula: Michigan Central R.R. (Michigan Central); Ann Arbor R.R. (Ann Arbor); Detroit & Mackinac R.R. (D&M); Wabash R.R. (Wabash); Grand Trunk Western R.R. (Grand Trunk); New York Central System (NYC); Pere Marquette R.R. (PM); Pennsylvania R.R. (Pennsylvania); Detroit & Toledo Shore Line R.R. (Shore Line).

Interstate Bus Lines: Central Coach Lines, Eastern Michigan Motorbusses, Enders Greyhound Lines, Gray Transportation Co., Greyhound Lines, Indian Trails, Northern Indiana Ry., Inc., Red Star Way Lines, Short Way Lines. Canadian-American Trailways.

Intrastate Bus Lines: Balcer Bros. Motor Coach Co., Big Rapids-Mt. Pleasant Bus Line, Copper Range Motor Bus Co., Dahringer Bus & Taxi Co., Flint-Caro-Sebewaing Bus Co., Foster Bus Line, Grand Rapids-Fremont Bus Lines, Great Lakes Motor Bus Co., Hansen Motor Transit Co., Hill Bus Line, Huron Shore Bus Line, Imlay City-Bad Axe Bus Line, Lake Shore Bus Line, Ludington-Baldwin Line, Mackinac Motor Bus Corporation, North Star Line, Northwestern Motor Bus Co., Owosso-Flint Bus Lines, Peoples Rapid Transit Lines, Petoskey-Harbor Springs Bus Line, Pontiac-Orion-Oxford-Lapeer Bus Co., Rogers' Motor Lines, Fred A. Russell Motorbus Lines, Saginaw-Port Huron Bus Line, Smith Bus Line, Yellow Bus Line.

Steamship Passenger Lines: Detroit & Cleveland Navigation Co. (Detroit and Cleveland, Detroit and Buffalo); Chicago, Duluth & Georgian Bay Transit Co. (Buffalo, Cleveland, and Detroit, Mackinac Island and

xxii GENERAL INFORMATION

Chicago, Midland, Ont.); Northern Navigation Division, Canada S.S. Lines, Ltd. (Windsor, Ont., Detroit, Sault Ste. Marie, Ont., Port Arthur, Ont., Fort William, Ont., and Duluth); Kirby Line (Cleveland, Detroit, Mackinac Island, Houghton, Isle Royale, Fort William, Ont., and Midland, Ont.); Ashley & Dustin Steam Line (Detroit to Put-In-Bay, Cedar Point, and Sandusky, Ohio); Detroit & Georgian Bay Navigation Co., Ltd. (Seaway Lines) (Detroit to Georgian Bay, Ont., and Manitoulin Island, Ont.).

Ferry Lines: Ann Arbor R.R. Car & Auto Ferry (Frankfort to Manistique, Frankfort to Menominee, Frankfort to Manitowac, Wis.); Pere Marquette R.R. Car & Auto Ferry (Ludington to Manitowac, Wis., Ludington to Milwaukee, Wis.); Grand Trunk Western R.R. Car Ferry (Muskegon to Milwaukee); Wisconsin & Michigan S.S. Co., auto ferry (Muskegon to Milwaukee); Beaver Island Transit Co. (Charlevoix to Beaver Island); Arnold Transit Co. (Mackinaw City to Mackinac Island, St. Ignace to Mackinac Island); State Highway Dept. Auto Ferry Service (Mackinaw City to St. Ignace); Walkerville and Detroit Ferry Co. (Detroit to Walkerville, Ont.).

Air Lines: American Airlines, Inc. (Chicago to New York) stops at Detroit and Battle Creek; Pennsylvania-Central Airlines Corporation (Detroit to Milwaukee) stops at Detroit, Lansing, Grand Rapids, and Muskegon (Detroit to Sault Ste. Marie) stops at Detroit, Flint, Saginaw, Traverse City, and Sault Ste. Marie (Detroit to Washington, D. C.) stops at Detroit; Marquette Airlines, Inc. (Detroit to Cincinnati and St. Louis) stops at Detroit.

Highways: Lower Peninsula has 12 Federal highways, 8 north and south, 4 east and west. Upper Peninsula has 4 Federal highways, 3 north and south and 1 east and west; 161 paved State roads and network of improved county and township roads overspread both peninsulas. Highways patrolled by Michigan State Police. Customs inspection at international boundary. State gasoline tax, 3¢. For highway routes see *State Map*.

Motor Vehicle Laws: No person under 14 yrs. of age, or person under the influence of intoxicating liquor or narcotic drugs, shall operate a motorcar. No maximum speed limit outside towns and villages, except on posted highways. In municipal business sections speed limit is 15

m.p.h., except where otherwise limited by local ordinances. No turns against red lights, except where signs specifically state they may be made, and then only after a full stop; in residential sections 20 m.p.h. Reckless driving is a misdemeanor carrying maximum penalty of 90 days' imprisonment and \$100 fine. Felonious driving is punishable by fines up to \$1,000 and imprisonment of 2 yrs. Nonresidents' passenger cars properly registered in own State may operate in Michigan for 90 days. Resident operators and chauffeurs must have State driver's license. Visiting motorists duly registered and licensed in State or country may operate motor vehicle for 90 days. Coasting downgrade out of gear prohibited. No parking on highways at any hour. Left side passing only. Ambulances, fire trucks, and funeral processions have right-of-way at all times. When meeting ambulance or fire truck sounding siren or horn, motorist must pull to halt at right curb. Hand signals shall be used. Spotlights permitted. Any motorist involved in accident must stop, give his name and registration number of car, and render reasonable assistance. If accident involves personal injury, motorist must report to nearest police station within 48 hrs. No vehicle drawing more than 2 trailers is allowed upon public highways; entire train must not be over 45 ft. in length. Injuring, knocking down, or carrying away road signs is a misdemeanor. Lighted cigarettes, match sticks, and pipe residue must not be thrown along roadside. Motor vehicles not permitted on Mackinac Island. Motorists while lining up and awaiting ferry at Mackinac Straits are subject to local village traffic regulations. All motorists subject to customs inspection at international border. Bridges unsafe for heavy trucks and trailers plainly marked throughout State.

Customs Ports of Entry: Bay City, Cheboygan, Detroit, Grand Rapids, Muskegon, Port Huron, Saginaw, Sault Ste. Marie, and South Haven.

Liquor Regulations and Sales: Liquor and wines are sold by the package in 100 State stores and 1,350 specially designated distributors (usually drug and grocery stores). Liquor by the glass is sold in 518 municipalities. Sale by glass is prohibited in 106 cities, villages, or townships, and in the counties of Barry, Gratiot, Hillsdale, Lenawee, Oceana, Shiawassee, and Wexford. Taverns, including beer gardens and certain types of restaurants, and hotels may be licensed to sell beer, beer and wine, or beer, wine, and liquor, for consumption on premises; by payment of additional fees, licenses for sale of liquor for consump-

tion off premises may be obtained (unnecessary in the case of most hotels, however). No one under 21 yrs. of age shall be sold any alcoholic liquor; no one under 18 yrs. of age shall be employed in a place where alcoholic liquor is on sale. No intoxicated person shall be sold any alcoholic liquor. Liquor consumed in public places must be drunk by purchaser while standing or seated at a bar or counter, or while seated at a table. Sale of liquor exceeding 16 per cent alcohol by volume is prohibited between 2 A.M. and 7 A.M. on weekdays, between 2 A.M. and 12 midnight on Sundays and election days, and on legal holidays in some communities. It is illegal to have in an automobile a bottle of alcoholic liquor on which the seal is broken. Drinking is permitted only in private homes or in places licensed to sell liquor for consumption on premises.

Hunting: Michigan offers extensive hunting opportunities for both large and small game. The upper half of the Lower Peninsula—north of the Bay City-Muskegon line—and the entire Upper Peninsula are excellent hunting areas. Most popular big-game animal found throughout this area is the Virginia white-tailed deer. State deer-census drives in 1935 placed the deer population of the State at 860,000, of which 150,000 were bucks of legal size. Good roads lead to all sections of the deer country; camps for the accommodation of hunters are numerous. Among small game the most important are the cottontail rabbit and ring-necked pheasant, in central and southern Michigan, and the snowshoe rabbit and ruffed grouse, in northern Michigan. Bear are numerous in the big swamps of the northern section; the bear season varies by counties. Fox hunting with dogs is not a widely popular sport, although many northern residents, thoroughly familiar with the country, engage in the sport. Fox squirrels are abundant in those sections of northern hardwood lands where oak and beechnut furnish food, but the squirrel is not considered an important game animal in Michigan. Black and gray squirrels are protected. Southern Michigan offers opportunities for raccoon hunting; quail, now protected, are numerous locally in that area. Among migratory waterfowl, ducks are numerous in the Saginaw Bay and Thumb areas and along many other sections of the Great Lakes shore line, and in many inland lakes. Wild geese offer seasonal sport in various localities.

Open Season for Hunting (dates inclusive): Deer (3-in. antlers) and bear, Nov. 15 to Nov. 30. (Bear may be taken in 8 counties—Ontonagon, Baraga, Menominee, Leelanau, Bay, Benzie, Missaukee, and

Ogemaw—throughout the year.) Rabbits (all species): Upper Peninsula, Oct. 1 to Jan. 31; Lower Peninsula, above north line T. 16 N. (Bay City-Muskegon line), Oct. 15 to Jan. 31; below north line T. 16 N., Oct. 15 to Jan. 1. Fox squirrel: Upper Peninsula, Oct. 1 to Oct. 10; Lower Peninsula, Oct. 15 to Oct. 24. Beaver and otter seasons are subject to official regulation annually. Moose, elk, black and gray squirrel, fisher, and martin are protected at all times. Muskrats: Upper Peninsula, Nov. 1 to Nov. 30; Lower Peninsula, above north line of T. 16 and west of Saginaw Bay, Nov. 15 to Dec. 15; below north line T. 16 and east of Saginaw Bay, including the Thumb, Dec. 1 to Dec. 15. Opossum, skunk, badger, and mink: Nov. 1 to Jan. 31. Raccoon: Upper Peninsula, closed season the year round; Lower Peninsula, Nov. 1 to Dec. 15. Chinese ring-necked pheasant: Upper Peninsula, closed season the year round; Lower Peninsula, Oct. 15 to Oct. 27. Ruffed grouse (partridge), prairie chicken, and sharp-tailed grouse: Upper Peninsula, Oct. 1 to Oct. 12; Lower Peninsula, Oct. 15 to Oct. 28. Subject to yearly regulation by the U. S. Biological Survey of the Department of Agriculture, the 1939-40 regulations on migratory waterfowl were as follows: Ducks (except protected species; wood duck, Grebe duck, Ross' geese, swans, bittern, loon, tern, gulls and heron), geese, brant, coot, jacksnipe, rails, woodcock, and gallinules; Oct. 1 to Nov. 15. Current regulations should be checked with local conservation officers.

Licenses: Nonresident, deer (including bear), \$25; nonresident small game, Upper Peninsula and Lower Peninsula north of north line T. 16, \$5; nonresident small game, southern part of Lower Peninsula, \$15; camp permit for deer, \$3; resident, deer (including bear), \$2.25; resident small game, \$1. Permanent blind permit, \$5. Federal waterfowl stamp (\$1) must be attached to small-game license of all waterfowl hunters. Licenses issued by State department of conservation officers and agents.

Limits: Deer (male), 1 a season; bear, no limit; rabbits, 5 a day, 50 a season; fox squirrel, 5 a day, 25 a season; pheasant (male), 2 a day, 6 a season; grouse and prairie chickens, 5 a day, 25 a season; woodcock, 4 a day, no season limit; geese and brant, 4 a day, no season limit; ducks, except prohibited species and except redheads, canvasbacks, buffleheads, and ruddy ducks, 10 a day, no season limit; ruddy ducks, buffleheads, redheads, and canvasbacks, 3 a day in the aggregate, which must be included in the 10-a-day bag limit of all kinds; jacksnipe, rails, and gallinules, 15 a day, and coot, 25 a day, with no sea-

XXVI GENERAL INFORMATION

son limit. Not more than 2 days' bag of small game may be possessed at one time. Unlawful to have deer or bear in possession more than 60 days after close of season. Unlawful to have a loaded gun in any motor vehicle. The use of dogs and lights in hunting deer and bear is prohibited. Baiting of wildfowl and use of live decoys is prohibited. No game bird or animal may be shot from a moving vehicle.

Deer and bear may be shipped from the State by a licensed nonresident, if metal tag bearing license number is placed in the ear of the animal and license coupon with license number and licensee's name and address is attached to body. A 2-day legal limit of small game may be taken from the State, if properly tagged and labeled and carried in open view.

Fishing: The Great Lakes shore line of Michigan and the inland lakes and river networks harbor many types of fish, from the comparatively tiny smelt to the fighting muskellunge. Many of the fish that inhabit the Great Lakes are river spawners, and the highlights of the season are the spawning runs in the spring. This is especially true of smelt, walleyed pike, perch, rainbow trout, and suckers. The late spring and summer seasons offer a wide range for fishing techniques, from fly fishing for brook, brown, and rainbow trout in creeks and rivers, to deep-sea trolling with copper lines for Mackinaw and steelhead trout in the offshore fishing grounds of the Great Lakes. Although the proportions of species vary, nearly every inland lake in northern Michigan offers fishing for at least one of the pikes, the bass, perch, and panfish trout; and along the shores of Lakes Michigan and Superior are many ports with facilities for Mackinaw trout trolling. Fishing through the ice is popular in winter, and colonies of fishing shanties spring up as soon as the ice is thick enough to bear the weight.

Fishing Laws: Game fish are defined as: brown, brook, and rainbow trout, landlocked salmon, grayling, black bass, bluegills, sunfish, yellow perch, pike perch (walleyed pike), grass (great northern) pike or pickerel, muskellunge, and warmouth bass.

Open Season for Fishing: All game-fish seasons in Michigan open either on the last Sat. in April, May 1, or June 25, but fishing is complicated by a variety of factors. Fishing waters fall in five classifications, subject to yearly change: (1) pike lakes; (2) trout streams and trout lakes; (3) all other lakes; (4) non-trout streams; (5) closed waters. Exceptions to regulations are also permitted for certain species in certain waters. A digest of information on these subjects comes with

fishing licenses, or can be obtained at any hardware or sporting goods store.

Limits: Brook, brown, and rainbow trout: 7 in. minimum, 15 a day or in possession; landlocked salmon and large- and small-mouth black bass: 10 in. minimum, 5 a day or in possession; pike: 14 in. minimum, 5 a day or in possession; yellow perch, rock, calico and strawberry bass, crappies, bluegills and white bass: 6 in. minimum, 25 (total) a day or in possession; white bass: 7 in. minimum, 25 a day or in possession; warmouth bass: any length, 25 a day or in possession; muskellunge: 30 in. minimum, no limit on catch; other nongame fish: any length, no limit; grayling and sturgeon protected at all times.

Fishing Licenses: Required of persons of 17 or over. Resident non-trout license (good for all species except brook, brown, and rainbow trout), 50¢ for both husband and wife; resident fishing license (good for all species), \$1 for individual licensee only; nonresident license, \$2 (wife of licensee may obtain a similar license for 50¢). All licenses issued by the department of conservation through its conservation officers and authorized agents, such as hardware and sporting-goods storekeepers.

Practices and Prohibitions: Two lines having four hooks or less under immediate control are lawful. In Lake St. Clair, trout lines or gang lines with not more than 100 sets of hooks with cut bait for taking catfish, bullheads, suckers, and noxious fish are lawful. In fishing through the ice, two lines, each with a single hook, under immediate control, are lawful. Dip nets not to exceed 9 ft. square may be used between Mar. 1 and May 15 for taking non-game fish. Spearing for non-game fish permissible between Mar. 1 and May 15. Spearing through the ice for game fish lawful on inland waters during Jan. and Feb., except in lakes specifically closed by order. Spearing on the Great Lakes for all species except trout, bass, muskellunge, sturgeon, grayling, or sunfish is lawful except in areas closed by commercial fishing laws. Motorboats may be used for trolling or still fishing but must not be operated in spawning waters. Firearms, explosives, and chemical substances that kill or stupefy fish are strictly prohibited. Grabhooks or snaghooks and artificial lights or lighted bait are also unlawful. It is illegal to buy or sell game fish at any time. Possession in closed season is also unlawful.

Camping: North of the Bay City-Muskegon line, which substantially divides the agricultural and industrial lower half of the Lower Peninsula from the recreational upper half, are areas totaling 15,000,000 acres of wild land suitable for any kind of camping. In these vast

xxviii GENERAL INFORMATION

stretches, thinly populated but dotted with many small communities that exist more or less as trading headquarters for the surrounding areas, are camps that range from palatial summer homes to evergreen-bough lean-tos constructed by woodsmen for overnight stops. Between these extremes are numerous areas under State and Federal control, which contain camp sites for tents or trailers, with water, cooking, and sanitary facilities. Numerous gasoline stations and crossroads stores far off the beaten track also offer tent or trailer camping space. For visitors who do not wish to carry their own equipment, thousands of overnight cabins and tourist homes offer either furnished living quarters or room and board. These facilities are often in isolated districts and can be located only through inquiry in the territory.

Accommodations: Lower Michigan south of the Bay City-Muskegon line has an ample number of hotels, rooming houses, and tourist camps. The northern part of lower Michigan and the entire Upper Peninsula are recreational regions. Resorts, taverns, and tourist camps are numerous, and summer accommodations are plentiful except at times of highly publicized festivals, such as the Cherry Festival at Traverse City. In winter many of these places are closed, and hotel service can be had only in larger cities and county seats.

Climate and Wearing Apparel: In the Lower Peninsula, summer days are warm, sometimes exceedingly so, and tropical and semitropical wear is comfortable; nights are normally cool, and light coats and sweaters are often necessary. Winters are cold, damp, with changeable weather. In upper Michigan and the Straits region, summer days are warm, and semitropical clothing may be worn. Nights are frequently cold, necessitating a change at sundown to heavier clothes and topcoats. Winters are extremely cold but drier than in the Lower Peninsula. Woolen underwear, heavy suiting, overcoats, overshoes, scarfs, and gloves should be worn. Much used in winter is the Mackinaw coat, an Indian blanket overgarment that originated in this country. A topcoat is essential on any summer lake cruise.

Drinking Water Outside Municipalities: Cold running springs throughout the State are uniformly safe, if marked by the black and yellow signs of the State Board of Health. Water in State parks and camping places is tested by the State Board of Health. If pollution exists at these places, warning signs are posted.

Poisonous Snakes and Plants: A small-sized rattlesnake, the massasauga, is the only poisonous snake in Michigan, and it is rarely seen. Poison-ivy, poison-oak, and poison-sumac are common in the wooded sectors of the State; poison-ivy is most to be feared, for it grows profusely near sand beaches. Expert knowledge is needed to identify edible mushrooms and avoid poisonous varieties.

Fires: Starting forest fires negligently or otherwise is a misdemeanor, and the law is rigidly enforced. Campfires must be carefully tended.

Information Service: Michigan Highway Information Lodge, New Buffalo, Berrien County; Michigan Highway Information Lodge, Wisconsin Interstate Bridge, Ogden Ave., Menominee; Detroit Tourist and Convention Bureau, 1805 Stroh Bldg., Detroit; East Michigan Tourist Assn., The Log Office, Bay City; West Michigan Tourist and Resort Assn., 22 Sheldon Ave., Grand Rapids; Upper Michigan Development Bureau, Marquette; Mackinac Island Tourist Bureau, Mackinac Island. There are chambers of commerce in 600 communities. The Automobile Club of Michigan has a main office in Detroit and 26 branches.

Summer Sports: Summer recreational possibilities in Michigan are divided into two classes: commercialized and natural. In scope, both classes cover every field of fishing, swimming, boating, camping, and sightseeing. The State's recreational area is too large to give any one portion of it unique credit for any one advantage; but, in general, the coasts of Lakes Michigan and Huron are best developed commercially. From New Buffalo, along southwestern Lake Michigan, and around the coast to Lake St. Clair, in the southeastern section, are sand beaches for swimming and well-developed harbors for boating; accommodations range from camping sites among the dunes to elaborate summer hotels. The Grand Traverse region is the focal point for Mackinaw and steel-head trout trolling in the Great Lakes, though other shore resorts are fast developing the possibilities of this new sport. In lower Michigan, the territory inland from the Great Lakes and north of the Bay City-Muskegon line offers abundant recreational advantages, with hundreds of lakes and rivers threading unsettled, ruggedly beautiful land that is fast reverting to its natural state of pine forest. The wilder areas of this region afford ample opportunities for roughing it, although campers need never be far from population centers and supply points. The really primitive outposts of Michigan's recreational zone are in the Upper

XXX GENERAL INFORMATION

Peninsula. Commercialized recreation has been developed in several places, including Les Cheneaux Islands, Tahquamenon Falls, and the Pictured Rocks, but great sections of the Upper Peninsula, such as the Whitefish Bay region, the Huron Mountains, and the Porcupine Mountains, are wild and untrammelled. In these areas fishing is the most-favored sport; camping in itself is a high adventure.

Winter Sports: Between 1925 and 1939, Michigan came to the forefront as a winter playground. Skiing, skating, tobogganing, and kindred sports became so popular during this period that, by 1939-40, winter sport carnivals had become an established event in numerous cities.

During the winter sports season, snow trains run from Detroit, Grand Rapids, Saginaw, and Bay City to the Lower Peninsula snow carnivals at Alpena, Grayling, Charlevoix, and Petoskey. Sports facilities in each community follow the same general pattern, with double or triple toboggan slides, skating rinks, ski jumps, and bobsled runs. A popular winter sport in Michigan is iceboating, which has spread from Lake St. Clair northward along the coast of Lake Huron.

Boating and Canoeing: Michigan's extended shore line offers unusual opportunities for small boating, a fact attested by frequent regattas held in many Great Lakes ports during the summer. The most important annual race is the Mackinac for sailing craft, from Detroit and Port Huron to Mackinac Island, and from Chicago to Mackinac. The favorite craft on the smaller inland lakes is the outboard motorboat; the Government register as of January 1, 1940, listed 14,850 power boats eligible to ply Michigan coastal waters. Because of connecting lakes and streams, Michigan has dozens of routes suitable for canoe trips of from one day's to several days' duration.

Festivals: Michigan festivals draw crowds the year round. They are held throughout the State to celebrate everything from fish and flowers to onions and sugar beets. Always gay, sometimes bordering on the burlesque, the festivals afford occasions for tumult and camaraderie. Fish and flower festivals are held in spring; summer ushers in outdoor festivals and regattas; autumn is widely celebrated with harvest and fruit festivals; and winter has numerous carnivals suited to the season. No Michigan festival is complete without a queen, and Michigan's enthusiasm for queens and festivals knows no bounds. The latest an-

nual event is a Pancake Festival inaugurated at Glenn in March 1938, to commemorate an emergency in December 1937, when blizzard-blocked roads forced the marooned populace and many stranded motorists to subsist solely on pancakes for a short but difficult period.

Calendar of Annual Events

JANUARY

First	at Flint	American Negro Emancipation Day
Twentieth to twenty-ninth	at Detroit	Detroit and Michigan Exposition
First week	at Grand Rapids	Furniture Frolic
Last week	at Alpena	Winter Carnival
Last week	at Grayling	Winter Sports Carnival
Last Saturday and Sunday	at Cadillac	Winter Sports Carnival
No fixed date	at Sault Ste. Marie	Herring Choker Jamboree
No fixed date	at East Lansing	Farmers' Week

FEBRUARY

Tenth	at Ann Arbor	Annual J-Hop
Eighteenth to twenty-sixth	at Detroit	Annual Builders' Show
Twenty-second	at Ishpeming	Ski Tournament
First Saturday and Sunday	at Escanaba	Winter Carnival
Second Saturday and Sunday	at Gladstone	Winter Carnival
Second week	at Sault Ste. Marie	Winter Carnival
Last week	at Grand Rapids	Winter Sports Carnival
No fixed date	at Petoskey	Winter Carnival
No fixed date	at Detroit	Shrine Circus

MARCH

Fourteenth to eighteenth	at Detroit	Michigan Tool Show
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xxxiv CALENDAR OF ANNUAL EVENTS

Twenty-second	at Flint	Puerto Rican Negro Emancipation Day
First week	at Flint	National Negro History Week
Third week	at Detroit	Michigan Flower and Garden Exhibition
No fixed date	at East Jordan	Smelt Jamboree
No fixed date	at Boyne City	Smelt Festival
No fixed date	at Ypsilanti	Bach Music Festival
Palm Sunday	at Detroit	Easter Lily Show

APRIL

First week	at Beulah	Smelt Festival
First week	at Menominee	Smelt Carnival
First Saturday and Sunday	at Escanaba	Smelt Jamboree
Last Saturday and Sunday	at West Branch	Trout Festival
Last Saturday and Sunday	at Kalkaska	Trout Festival
No fixed date	at Tawas City	Perch Festival
No fixed date	at Kalamazoo	Pansy Festival

MAY

Fourth and Fifth	at Detroit	Dog Show
Thirtieth	at Detroit	Memorial Day Parade
First to thirty- first	at Grand Rapids	May Theater Festival
Fifteenth	at Fort Custer (Battle Creek)	Army Troops Training begins
Last week	at Ann Arbor	Ann Arbor Dramatic Season
Last week	at Glenn	Pancake Festival
No fixed date	at Ann Arbor	May (Music) Festival
No fixed date	at Holland	Tulip Festival
No fixed date	at Dearborn	Early American Dancing
No fixed date	at Ann Arbor	May Festival
No fixed date	at Sault Ste. Marie	Smelt Jamboree
No fixed date	at Muskegon	West Shore Music Festival

JUNE

Fifteenth	at Ypsilanti	Cleary College Commencement Exercises
Seventeenth	at Ann Arbor	University Commencement Exercises
Twenty-third	at Cadillac	Viking Water Festival
Second Sunday	at Jackson	Rose Show
Second week	at Ann Arbor	Alumni Reunions
Third week	at Ann Arbor	Alumni University
Last week	at Grand Rapids	Furniture Frolic
No fixed date	at Flint	International Folk Festival
No fixed date	at Ypsilanti	Baccalaureate and Commencement Exercises

JULY

First to fourth	at Manistee	National Forest Festival
Third	at Crystal Falls	Bass Festival
Second week	at Traverse City	Cherry Festival
Last week	at Menominee	Water Regatta
No fixed date	at Detroit	Police Field Day
No fixed date	at Port Huron and Mackinac Island	Port Huron to Mackinac Yacht Races
No fixed date	at Grayling	National Guard Encampment
No fixed date	at Port Huron	Blue Water Carnival

AUGUST

First week	at Grand Haven	U. S. Coast Guard Water Fete
Second week	at Douglas Lake (Cheboygan)	Visitors' Day, U. of M. Biological Camp
Second week	at Grayling	Canoe Carnival
Third week	at Saugatuck	Art Festival and Artists' Ball
Third week	at Escanaba	Upper Peninsular State Fair
Last Wednesday	at Edenville	Edenville Lumberjack Picnic

xxxvi CALENDAR OF ANNUAL EVENTS

No fixed date	at Escanaba	Venetian Night
No fixed date	at Ludington	Father Marquette Pageant

SEPTEMBER

First to tenth	at Detroit	Michigan State Fair
Saturday and Sunday preceding Labor Day	at Romeo	Peach Festival
Last week	at Paw Paw	Grape Festival
No fixed date	at Chatham	Farmers' Roundup
No fixed date	at Detroit	Firemen's Field Day

OCTOBER

Twenty-eighth to thirtieth	at Benton Harbor	Fruit and Flower Festival
First week (usually)	at Detroit	Rodeo
Second week	at Detroit	Chrysanthemum Show
Third week	at Ann Arbor	Football season opens
No fixed date	at Ann Arbor	Homecoming Day

NOVEMBER

Eleventh to nineteenth	at Detroit	Auto Show
Fourteenth	at Detroit	Michigan Artists' Show opens

DECEMBER

First week	at Grand Rapids	Apple Show and Horticultural Convention
Second week	at Grand Rapids	The 'Messiah'
Third week	at Grand Rapids	Christmas Season Concert
Third week	at Ann Arbor	Annual Community Christmas Sing and Pageant

Other local events are to be found under individual city treatment.

PART I

The General Background

Contemporary Scene

WHAT sort of State is Michigan? What are Michigan people like? To answer these questions is no simple task, because Michigan is unlike any other commonwealth that lies between the two oceans, and the people who inhabit it have been molded and conditioned by a variety of circumstances that never prevailed elsewhere.

In the Green Mountain State one may point to an individual and say: 'There walks a typical Vermonter.' In Virginia, one may select with ease a citizen who would be recognized as a Virginian in Timbuktu or Vladivostok. Cotton, grain, cattle States, all have developed their types. But not Michigan.

Not Michigan, because, for one thing, the place is physically so lacking in State-wide characteristics. Start at the Monroe marshes and the flat, naturally wet plains in their hinterland; westward are the fertile reaches of Michigan's southern counties, where pioneer plows rolled back soil potentially as productive as prairie lands more loudly sung; northward lies a vast region of generally lean sands where, two short generations ago, stood the vast forests of pine that Michigan thought never would be exhausted; farther, the light soil types, where once northern hardwoods cloaked the hills, but where now, behind the battered dunes of the Lake Michigan shore, hand-reared trees stand in regimented rows to make one of the great fruit-producing sections of the earth. Moving northward, across mighty rivers and past inland lakes by the thousands, the traveler reaches the Straits of Mackinac, dividing Michigan and, again, making comparison with any other unit of the Nation impossible; hardwood and pine were there, and sweeping areas of dark swamp growth sprawled over the eastern end of this, the Upper Peninsula, while on the ridges the rock commenced to emerge from the soil; to follow the rock toward Wisconsin and to see the increasing evidence of iron and copper riches is to realize the long distance and the many different areas that lie between this country

and the marshes of the Ohio Line. And on all sides, setting the State apart from its forty-seven fellows, is a frame as blue as the Mediterranean—the Great Lakes: Superior, hurling its mighty breakers upon the rocky ramparts of the Upper Peninsula; Michigan, snarling at the dunes along the eastern coast; Huron, laving the golden beaches with its surf; and Erie, insistently nudging the rushes of the Monroe marshes. Such variety as this does not shape men in a common mold.

And, because of what Michigan people did with what they found, Michigan did not develop a type. Into the creation of this State from a wilderness went vision and wisdom, shortsightedness and stupidity; tremendous physical energy and appalling lethargy, and—inexorable accompaniment of the search for new homes in new lands—treachery and cowardice, heroism and nobility.

Easy come, easy go. Perhaps a part of the answer is there. Michigan came to our forebears easily—after they had tried the hard way, of course. After they had fought first the French, then the British, then the British again; and, through it all, the native Indian. Michigan fought Indians for half a century in bloody wilderness campaigns, before General Lewis Cass, the territorial Governor, sat down in a circle of native chiefs at the mouth of the Saginaw.

The general ordered his men to broach a cask of rum. Then another; and another. Dark faces pressed closer, bare arms thrust forward eagerly as the cups were filled. Hours later, the dignity of the savage shaken by the white man's most potent bargaining asset, all those wars were only history, and Cass had secured for the young United States millions of acres of forested, fertile land—land which was first to furnish housing material to the settlers of other States, later to do its bit in feeding populations of less basically productive areas.

Just one treaty, true, but it was so easy. And it showed the way to more.

So, born in bloodshed, dissension, sharp dealing, and common courage—elements existing at all our frontiers—Michigan's place in the national contemporary scene has been won by a series of physical and tonal changes that in their variety and clarity have made the State, not one, but many; have given it, not one, but half a dozen histories; and have stroked a painting that at today's point in its development is one of a fascinating, complicated character.

It may help in understanding Michigan to detail some of the epic moves that made it what it is.

Long before Michigan reached statehood, fire swept the long-contested village of Detroit; and sawmills on the St. Clair River—crude affairs that had answered the slack needs of the settlers—were set whirling to rebuild Detroit. This, Michigan's initial industrial boom, laid the pattern for what was to come. In 1834, the first steam sawmill was erected on the Saginaw River, and a little more than two decades later 558 similar plants were in operation in the pineries or at the mouths of the great rivers that drained them.

The rape of the Michigan forests was on. Today we know that the grand old days of the State's lumber prosperity—the Holy-Old-Mackinaw, Come-and-Get-It era, which reached its peak in the eighties—were days to be bitterly regretted almost before the last drive was down and the river hogs, sharp caulked boots on their feet and lusty greed in their veins, started taking the town apart. For some, this regret may be slightly tempered by the knowledge that we, and the men who stayed only long enough in Michigan to make away with their gains to the South and West, profited in dollars from the pine by thrice the amount that those who took the gold from California's earth received, and ten times the value of all the yellow ore yet mined in Alaska. But, to accomplish this, a whole section of the State was laid waste and a great segment of its population forced to back up, make a new start, forget all it had learned both about living and making a living, and become another sort of people, seeking to scrape, for a period, sustenance from a soil that had yielded one treasure and was exhausted by the effort.

That was the pine. It was only one resource. Another great opportunity for contribution, exploitation, and, perhaps, error was in its minerals. Centuries before the whites arrived, the Indians had known of Michigan copper, some of it outcropping in ore, more of it lying exposed in boulder form. Up from the pits, then, of Houghton and Keweenaw Counties, the newcomers brought copper in the purest form yet discovered on earth; and from this second source Michigan gave to the growing, demanding Nation her wealth, gave at a price, both to the consumer and herself. During the period roughly paralleling the rise of logging to its climax, Michigan produced half the copper mined in the United States (the total output from the time of the opening of the first working to the present is well over nine billion pounds); but, in recent years, the State has been forced to carry the burden of regiments of unemployed, stranded miners.

Michigan, too, poured out high-grade iron ore to still the hue and

cry of needful markets—millions of tons of it. Before the great Minnesota ranges were exploited, Michigan led the country in the production of the metal without which civilization as we know it could not have come into being. Welshmen, Lithuanians, Austrians and Finns came by the trainload from their native lands to toil in shaft and pit, on stock pile and dock; and then, almost before Michigan knew it, the greatest of the copper mines petered out, scores of iron workings were abandoned as no longer profitable in yield, and thousands of families, some of them foreign born, more of them second-generation Americans, were left with no place to go. Shifts of occupation and environment such as these do not unify a people.

Easy come, easy go. We had won those forests, those mineral deposits so easily. Land was such a cheap possession. But land had once given economic virility to great reaches of the State; land must do it again, we reasoned.

We tried to colonize those stripped acres. We got up a lot of high-sounding slogans, such as 'A Farmer for Every Forty,' to bolster the failing enterprises of the cities and towns that had grown up when lumber and metal were kings. The plow could and would follow the axe, we determined; the farm would absorb those legions no longer needed in the forests and in the bowels of our earth.

Michigan still winces when it thinks of that period: of those desperate, foolhardy campaigns to make agricultural centers of sawmill and mining towns. Millions of acres were for sale; in addition to honest but ill-advised sales efforts, sly tricks were invented to tempt the land-hungry from hither and yon. For a quarter of a century, in one section or another, people were induced to settle and invest their savings and their vitality and their hopes in property from which, as we know now, no return from agricultural effort could be expected. That is why the scraggly lilac bush grows beside the slowly filling-in cellar way on so many hundreds of Michigan forties, with fragmentary remains of fences round about—all-but-lost evidences of attempts to make lean soils yield—and the volunteer forest growth creeps down from the hills to cover, at long last, these signs of spurious or mistaken enthusiasm for community building. You can't expect a State to develop an easily recognizable type when so many of its people, coming with chins up and eyes bright, depart with shoulders slacked and mouths embittered to make another start elsewhere.

But do not assume from this that all of Michigan is unfitted to produce food for man. Far from it. Whole southern counties are

miracles of agricultural productivity. Along the edges, and lacing through what was the great pine belt of the Lower Peninsula, are islands and stringers of good-to-excellent soil where families have lived for generations, sending fruit and cereals and meats out to States of narrower crop diversity; and, in some of the stock-raising sections of the Upper Peninsula, hay stands high-piled, to cure upon the acre that produced it.

Michigan's forests, which had built the cities and towns and farms of the grain belt—actually built, from wagon spokes through railroad ties and sills and rafters to interior finish—no longer survived in stands spectacular enough to hold the eye and attention of an expanding nation. Its copper and iron had come to be taken as a matter of course. The push was westward; the stream of traffic, to the south of its boundaries. People went past. Life went past. For a period Michigan was an eddy in the stream of growth, a backwater in national interest, socially and culturally and economically as well as geographically.

The bulk of its timber barons had pulled stakes and gone, investing their Michigan-won millions in Southern or Western timber lands; the mining properties were largely absentee owned. Many local leaders had moved on to new frontiers, and less spectacular if further-seeing men were left to fix up what had been broken.

It was no easy task. It was no process in which a common calling unified and shaped people.

There was agriculture, working out its practice and developing its specialties so the best of the land would continue to be friendly. In that forty-mile width banding the shores of Lake Michigan, from the little finger of the Lower Peninsula down to the Indiana Line, men found that fruit trees would grow and bear abundantly if properly planted and cared for; and today the State is first in the production of cherries, and its annual millions of bushels of apples and peaches are among the choicest in the world. Celery of such quality was raised in the Kalamazoo district that the very place name became linked in the Nation's mind with the vegetable. In the same section and extending over a larger area, the cultivation of spearmint and peppermint expanded, so that today Michigan is in second place in the yield of these herbs; and the needs of breakfast-food manufacturers in Battle Creek so spurred the planting and harvesting of grain that at one time cereal produce amounted to two-fifths of the State's agricultural assets. And beans? No State rivals Michigan in its tonnage of beans! And tens

of thousands of acres go annually into sugar beets. Dairying is important here, and wool is a sizable crop; potatoes and onions and fresh vegetables for canneries give employment to armies. Tot up the score and, in spite of everything else to be considered, Michigan may be proud of its farm lands.

There was the discovery of Michigan's great salt deposits in the east and southeast—deposits that have kept it, since 1920, ahead of all other places in salt production. There was petroleum, enough to make Michigan second among producing States east of the Mississippi by 1938. Also in the southeast, near enough to the metropolis and to waterways to allow for easy distribution and shipping, bituminous coal was found to underly 10,000 square miles of the State's surface, and, for a period of five years, well over a million short tons were mined and marketed annually.

There was industry: furniture in Grand Rapids, paper in Kalamazoo, wagons and carriages in Flint and Jackson, and a wide variety of small manufactories sparsely dotting the areas to the north, helping the hardwood sustain the commercial life menaced by the passing of the pine. The hardwood lasted longer than the pine. It lasts until today; not a great deal of it, comparatively, but saws still sing in maple and birch in the Upper Peninsula and will for years to come; although the thousands of mills and woodenware factories that once abounded in Michigan have shrunk to scores.

And never forget for long the Great Lakes when thinking of Michigan! The Great Lakes, yielding fish for hungry millions; three thousand Michigan men employed in the fisheries, braving these lusty deeps in tiny craft to haul their nets, developing a tradition and a character all their own. Lake Michigan, offering a way to relieve the bottle-neck of Chicago freight terminals, a problem of the Northwest for a generation; Lake Michigan, offering a way to get freight cars into long treks without delay, by shunting them aboard great vessels and ferrying them across the eighty-odd miles of the lake's breadth to the Wisconsin shore, summer and winter, despite ice or fog or storm. Fleets of these ferries now ply the courses, running like clockwork, crushing twenty-four inches of tough blue ice without a quiver, the greatest fleet of ice-crushing ships afloat. And the other four lakes that border Michigan float to market the ore and stone and grain the Nation needs, supplying the country with cheap water transportation for such basic commodities as iron, copper, wheat, and corn. Michigan men man those vessels; not all of them, of course, but, from every

Michigan port on Erie, Huron, Michigan and Superior, boys have gone down to these inland seas and left a family behind to watch the weather and walk the floor through November nights when hurricane warnings fly from coast guard signal towers, and the lean, long, bulk freighters roll down from the head of the lakes toward Erie ports with hazards on every side that would drive a salt-water veteran mad.

These things Michigan had, along with horses to shoe and groceries to sell and suits to make, in that interval when the State was so largely forgotten. Its people scrambled to get along in the slackness following pioneer booms—a people with a wide range of opportunities and obligations. But a people shifting from this to that, pulling chestnuts out of the fire and constantly starting over again, cannot evolve a State-wide type.

Then there was Detroit—'Detroit, The City Where Life is Worth Living,' as it was spelled out in flowers on the City Hall lawn. It was. It still had, when the century turned, some of the qualities of self-satisfaction and stability that might have characterized a community of like size in an older State. It manufactured stoves and drugs and machinery, shoes and clothing and railroad equipment. It had a board of commerce that insisted Detroit had its glory ahead instead of behind. But it was just another city.

And then came Ford. And Chalmers and Olds. And Joy and Durant, Nash, Willys, and Chapin. And Detroit became today's Detroit!

The city where life was worth living? Maybe. But Dynamic Detroit. This Detroit was heralded by after-dinner speakers to be heard, if not around the world, at least a considerable portion of the way.

Gone was the pleasant lethargy that had hung over from the nineties, that feeling of complacency and self-satisfaction with what had been achieved. In its place came the fever of the pioneer, the same impulse that had sent the first land-lookers rushing into the pineries, that had sent geologists scrambling over the rough hills of the Upper Peninsula. Here was another opportunity! Here was the thing for which Detroit, maybe Michigan, maybe the whole Nation had waited!

New names, then; new pursuits; new methods and objectives and figures—increasingly astonishing figures! From 1910 until the close of the first World War, Detroit was in turmoil. Detroit burst its bounds, swallowed other sizable cities. Detroit built out into the country and up into the air. Detroit boosted and boasted, but even the loudest boosters and the biggest boosters could not keep pace with fact.

Because Detroit had evolved something new in production. Detroit

had created and perfected the assembly line. Detroit had blazed a trail for industry that was going to revolutionize industrial practice, and maybe society itself, before its influence was spent.

Detroit needed men. Not skilled men. Just ordinary, healthy, fast-moving men, preferably young and only intelligent enough to do as they were told and determined enough to keep doing it.

Well, men were available. The boys of those unfortunates who had bought the submarginal acres up in the pine belt were ready to go out on their own. And there wasn't much need of them at home. A man could work his back sore and his heart sick even on pretty good land, those times, and not get anywhere.

So into Detroit went the sons of farmers. And the sons of small-town merchants who were having a struggle because the farms weren't doing so well. And the sons of lumber jacks, who had figured on going to the woods themselves, even if the woods were only remnants of what they had been when their fathers were young. And the sons of miners who were spending more days sitting around the house than they were in the shafts. Township after township was drained of its youth. Older men went, because in those days your fortieth birthday had not become a point of terror. County after county was tapped for labor, and still it was not enough. Up from the Appalachians came another army. From the Deep South arrived the Negro by thousands. The World War ended. Old nations, revived nations, nations never heard of before Versailles, poured their legions into Detroit, to become parts of Michigan, and how is a State type to evolve under conditions such as those?

The submarginal farm could no longer compete for labor with Detroit, just a short day's journey away. Even some of the finer types of soil could not bid against the wage set up by the automobile industry. Forests gone, farms reduced in number, mining on the down grade, population drained by this mighty down-State industry, the upper, leaner counties finally awakened to reality.

About all the misuses of land known to man had been tried, but still the land remained. And in the hearts of Michigan men that kinship with, that love of the land survived. The fundamental problem of proper use of land was beginning to be understood: Make it do only what it best can do. And Dynamic Detroit, in the beginning of its rebirth so foreign, so hostile, to the balance of the State, gave to the State the one tool with which its greatest number of acres could be made to yield.

The motorcar made the tourist industry what it is today. The motor-

car and the modern highway. Ever since before the Civil War, Michigan has been known widely as a resort State, and after the World War it became a tourist State with a vengeance. All the factors necessary were present: higher wages and consequent leisure, swift and cheap transportation, an appreciation that fish, game, scenery, and solitude may be available on land that will produce no corn or potatoes, and the realization that, in furnishing facilities for recreation, thousands can find profitable employment.

Industry is not dead outside the Detroit area in Michigan. Far from it. But today the tourist industry ranks as the State's second business asset. Villages are sustained by it; small cities thrive on it; metropolitan areas remain prosperous because of its ramifications. The land that was gutted for its timber and its metals has found a new use. From the Indiana Line on the south, to the Porcupine Mountains beyond the copper ranges, the tourist industry is a State-wide interest—and a vital, growing interest—because the State has limitless advantages for summer vacationing and is adjacent to so many centers of population.

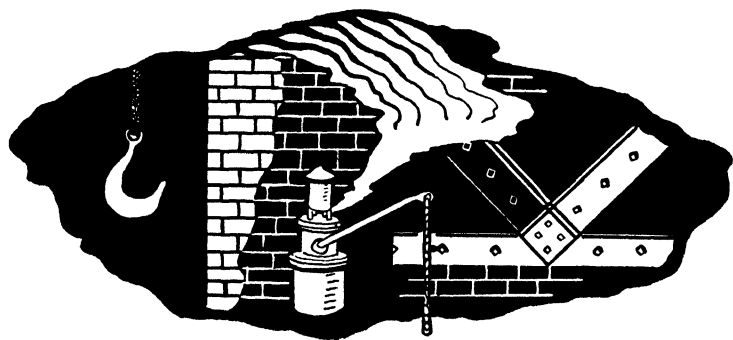
Just across the Ohio and Indiana Lines, the tourist homes' signs commence to bloom, a profitable sideline for communities finding their economic mainstays in other pursuits. As the traveler progresses northward, the signs increase in number, the evidences of the tourist business grow more pronounced, until, but a brace of swift hours beyond the boundary, he is in the heart of a land dedicated to the safe and sane exploitation of recreational facilities.

Michigan's forests are being revived, as you will be told in detail further on; Michigan's lakes and streams are being so managed that their yields of fish will remain assured. Michigan's smaller cities and towns and villages are administered with an eye to pleasing the summer visitor. Even the solitudes of Michigan's unpeopled areas are recognized as assets because of their appeal to men and women wearied by urban confusion. As cotton is to the South, stock to the West, and timber and mining once were to another Michigan, so today the tourist traffic is the one interest that pervades every township in the State. Perhaps this is the factor that finally will mold a Michigan type.

We do not believe there is danger of our becoming a race of innkeepers. We have been through too much, we Michiganders, to let ourselves become servile or unctuous. We pump gas and hand out hot dogs and dig fish worms for a fee, yes. But we brought the pine down the Saginaw and Muskegon and all our other rivers for a fee. And we

went down into the earth after copper and iron for a fee. And we grow food and clothing for a fee, too. This selling of vacations has its roots in the same substance: in the soil. We are growing and marketing a new crop from the same acres that grew pine and hardwood and that blanketed our minerals, but we have come to respect, almost to revere, those acres; we know they must not be abused and betrayed if they are to sustain us.

Easy come, easy go . . . Well, we know that now. We tried the easy way and met disaster. Now we are on the hard road, but we believe it is a high road. We Michigan folks are proud of what we are doing and the way we are doing it. We want the world to know of that pride, and by it we want to be known ourselves.



Natural Setting

THE physical agencies that forged Laurentia—the first North American continent—set Michigan apart for special development. Traces of the granitic rim of Laurentia remain in southern Canada and to the northwest in Wisconsin, marking the northern shore line of the Michigan Basin, which extended well into Ohio. Within this basin, defined perhaps one or two billion years ago, began a series of creations and destructions that have been the joy and dismay of geologists. Successive deposits lined the basin, building formations that resembled a nest of huge shallow bowls. Even now the record of the 24 to 30 times that great sections of Michigan were alternately land and sea is not wholly clear.

Formation of the Michigan Peninsula was the result of intense volcanic activity, of sedimentation in basin-shaped seas, of uplift and subsequent erosion. The volcanic disturbances agitating the ancient land mass—palpitant movements rather than violent eruptions—were inner-earth heavings that bulged the crust of rock to mountain height and turned flat-lying rocks so nearly on edge that some of them were folded almost to the point of overturning. These upheavals formed new barriers, along which lava flowed from the interior of the ancient continent, to form mineral-bearing veins.

Scattered remnants of Archean rock, the oldest earth rocks known, are found in the Upper Peninsula, in exposures similar to those of the highlands of Norway and Scotland. Composed of schists, granites, and gneisses cut by dykes of lava, they are believed to have been formed when convulsively moved rock masses reared above the sea of the newly formed planet. Subsequently, they were upthrust along the southern shore of Laurentia. Many knobs of Archean rock, some rounded by glacial action, rise west of Marquette. Archean areas form part of the highlands of the Felch, Gogebic, Marquette, Menominee, and Crystal Falls districts.

The first sedimentary rock laid upon the Archean surface was the

Huronian formation, chiefly composed of sandstone, shales, and limestones—now appearing as quartzite, slate, and marble—and the iron formation. This deposit was lifted to mountain height in some places and baked, folded, faulted, and fractured. Long periods of erosion followed, in which thousands of feet of rock were worn from the layer. Cores of Archean rock were thus exposed, and the Huronian iron-bearing beds were brought to, or near, the surface, where oxygenated and carbonated water converted them into the ore now worked in Iron, Gogebic, Baraga, Marquette, and Dickinson Counties.

Keweenaw Peninsula was created by, and in, the long period of volcanic activity that followed a quiet interval at the close of the Huronian earth movements. For hundreds of thousands of years, immense flows of lava covered the site of Lake Superior and the region immediately surrounding it. This movement is believed to have deepened a part of the already existing Lake Superior trough and made the basin of the present lake. Perhaps contraction of the trough caused the great crack in the upfold now known as the Keweenaw Peninsula—a crack, or fault, that extends from Bete Grise Bay to Lake Gogebic. The layers of lava and interbedded material of the western half of the peninsula dip to the northwest and extend under the west end of the basin—reappearing in Isle Royale—and to the north shore of Lake Superior.

The crack occurred along the present axis of the peninsula. The section lying east of the crack sank hundreds of feet below the western part, which, exposed to erosion, was subsequently reduced to a series of knobs. This series extends from the peninsula point, a little west of center, to the Porcupine Mountains, west of Ontonagon, in which is the highest peak in the State—2,023 feet above sea level. The western part of the peninsula is covered with sandstone formed during the Keweenawan period, and the eastern part by a younger sandstone. Copper was concentrated in the porous lava and the interbedded conglomerate. The section of the so-called Trap Range, in which copper is mined, extends in a mile-wide belt from Bete Grise Bay southeastward through Mandan, Calumet, Houghton, Mass City, and Rockland.

The eastern end of the Upper Peninsula and the whole of the Lower Peninsula are of more recent development. The Michigan Basin was part of the great geologic depression that occupied the east-central section of the continent from very early geologic times to the close of the Carboniferous period. Like the larger basin, the Michigan Basin was alternately invaded and deserted by epicontinental seas from the north and south. At times, parts or the whole of the area became arid

land or a region of shallow seas, in which salt and gypsum formed. In the course of millions of years, the old rocks of the basins were buried thousands of feet beneath successively younger rocks derived from the older formations. The newer deposits were distributed in areas corresponding to the seas in which they were formed. Thus it was that the bowl-shaped rock formations came to be nested, each succeeding one within the last previously put down—and all sloping toward the basin centering west of Saginaw Bay.

In the Ordovician period, an upwarp began in the greater continental basin in the region of Cincinnati, extending northward into southern Canada and bifurcating across northern Indiana. This upwarp, the Cincinnati Arch, virtually closed off Michigan and left it to develop by itself, although seas of later periods invaded the Michigan Basin. Prior to the upwarp, deposits were almost continuously laid down in the seas that occupied the Michigan Basin. Cambrian strata comprise much of the south shore of Lake Superior. For long distances, as between Grand Marais and Munising, this rock has been undercut by waves and broken down, leaving columns, grottoes, rocky headlands, and bare vertical cliffs, 50 to 80 feet high. The exquisitely varied color of the rocks thus sculptured along the shore east of Munising, for 15 to 20 miles, has caused the section to be named Pictured Rocks (*see Tour 18B*).

Lying shingle-fashion above the Cambrian sandstone in the east end of the Upper Peninsula are several groups of Ordovician shales and limestones, mostly covered by glacial drift. The Niagaran group of dolomites and limestones of the Silurian formation, on the north shore of Lakes Huron and Michigan, was a determining factor in the origin of several features of the State. Between 500 and 750 feet thick, the Niagaran consists chiefly of massive beds of limestone harder than strata below or above. In the long ages after the elevation of Michigan to a land surface, erosion sought out the weaker rocks for its relief sculpturing. The thinner northern edges of the Niagaran have been eroded back to a northward-facing cliff, below which lies the nearly flat plain of the eastern end of the Upper Peninsula. Above the Niagaran to the south, eroded from the eastern and western edges, are softer strata that have become the basins of Lakes Michigan and Huron. The Niagaran limestone occurs from Chicago northward through Green Bay, curving across the Upper Peninsula and thence southward through Ontario to Niagara around the low Michigan Basin, within which all later formations come to the surface in diminishing concentric rings.

Eleven major groups of more than 35 formations, divided into many layers of bedrock arranged bowl-fashion and approximately 5,500 feet thick, fill the Michigan Basin above the Niagaran limestone, but only small areas of these outcrop, because of the thick glacial drift which covers them. The mineral resources in these formations of the Lower Peninsula and the eastern half of the Upper Peninsula are as distinctly nonmetallic as those of the western half of the Upper Peninsula are metallic. These resources, widely distributed, consist chiefly of oil, marl, peat, salt, brine, clay, shales, gypsum, limestone, sandstone, mineral waters, potable waters, and low-grade coal.

The present form of Michigan was established with the last glacial retreat, which occurred between 10,000 and 35,000 years ago. The ice sheets left moraines, long serpentine eskers—popularly called ‘hogbacks’—canoe-shaped drumlins, kames, sinkholes, valleys, and hills of many varieties. Water filled the huge ice-dug valleys and formed Lakes Erie, Huron, and Michigan. More than 5,000 lakes of varying size and shape were left dotting the State, with almost as many rivers and streams to drain the lowland, swamps, and marshes.

Little of geologic importance disturbed Michigan’s peninsulas after the glacial retreat. Slight and infrequent earthquakes in the upper Great Lakes region were the chief manifestations. These were attributed to a continued uplift of land long-depressed by the weight of the ice fields, which are believed to have covered the State to a depth of between two and six miles.

GEOGRAPHY AND TOPOGRAPHY

A distinguishing character of Michigan is its possession of two peninsulas, sharply differing in surface features. Each peninsula has alluring landscapes and scarred wastelands, but even these show marked differences. It once was proposed that the peninsulas become separate States, and, indeed, only two major points of geographical kinship are readily discernible: their nearness at the Straits of Mackinac and their adjacency to the Great Lakes.

The mitten-shaped Lower Peninsula, except on the south, is bounded by the Great Lakes and their short connecting rivers. Its surface, in general, is low-lying, with occasional hills and two large upland areas. A ridge of glacial deposit that seldom rises above 1,500 feet, extending from Mackinac to central Michigan, approximately bisects the northern half of the peninsula. Its highest point is near Cadillac, where the

morainic mass reaches 1,129 feet above Lake Michigan, or 1,712 feet above sea level. These moraines (residue of the glacial halts and retreats) are strikingly apparent in Oakland and Washtenaw Counties, where the Huron and Erie glacial lobes collided, leaving a jumble of hills. A similar conflict between the Saginaw and Michigan lobes is evident in Ogemaw, Wexford, Missaukee, and Roscommon Counties. The moraines changed the drainage of the ancient land, which formerly had been toward the Mississippi Valley. Recurrent surges and retreats of ice masses modeled and remodeled the land, establishing new lakes and new streams with each successive deposit of rocks and soil. They cut new water outlets and left preceding lake shores high and dry. One such old shore line is occupied today by Summit Street in Ypsilanti, which overlooks the entire city; all highways that converge upon Detroit and Monroe cross ridges that once were shore lines of the ancient Erie Valley.

The Upper Peninsula is marked in its eastern portion by low-lying lands, some of which are swamps. The largest swamp area is that spreading along the Tahquamenon River, which meanders eastward across the central eastern section—often a barren, stump-strewn land, lined across the south by rolling limestone hills and on the north by sandstone tablelands, such as those in Alger and Marquette Counties, whose sheer, multi-colored walls present some of the most picturesque scenery in eastern America.

The western half of the Upper Peninsula, broken, wild, and harsh, is in sharp contrast to the rest of the State—physically and economically. It provides at once the State's most spectacular physical beauties and its most lavish mineral wealth. West of Marquette, the peninsula rises rapidly to a tableland that, in the green-blanketed Huron Mountains, lies 1,600 to 1,800 feet above sea level. From this line westward, the country is rugged in the extreme. Within the district are vast iron-ore deposits, and in the Keweenaw Peninsula of the northwest is the copper strip that enabled Michigan to maintain the leading position among copper-producing States for 40 years. The Porcupine Mountains along the northwestern shore rise to 2,023 feet—the highest point in Michigan.

Roughly parallel to the lake shores of both peninsulas are ranges of hills that delineate the shore lines of the Great Lakes of ancient times. In many places the hills rise sharply, their flanks cut by shore formations and excellent beaches. The beaches in southern Michigan slope gradually to deep water; those in the north are more abrupt.

The Great Lakes and 34 primary river systems have shaped the economic destiny of Michigan. Second largest State east of the Mississippi River, with an area of 57,480 square miles of land, and, in addition, about 40,000 square miles of Great Lakes water surface within its boundaries, Michigan is one of the foremost industrial and agricultural States. Its timber, farm products, vast stores of both metallic and nonmetallic minerals, and innumerable manufactured products have gone forth to the world on the great natural shipping lanes of lake and stream.

The Michigan coast line is 3,177 miles long, of which 120 are harbor and inlet coast lines and 833 are island shore lines. The shores of the Upper Peninsula are generally rocky, picturesque, and even dramatic in appearance, varying as they do from dune and beach to crag and precipice. The dunes of both Upper and Lower Peninsulas are among Michigan's most interesting phenomena. Whimsically shifting, barren and somber, they are a never-ending attraction for visitors.

The river systems of both peninsulas are the products of glacial moraines and hence differ from the dendritic branching of plains-country systems, in that tributaries usually come from only one side. Michigan's numerous streams are, in general, short. On the Lower Peninsula, they flow gently, smoothly over well-worn beds; only a few are turbulent and scurrying. The rivers of the Upper Peninsula, however, are wildly boisterous. In their haste to reach the lakes they tumble excitedly over waterfalls, jostle among boulders, and chafe irritably against rocky barriers. The most impressive falls are those of the Tahquamenon. The swift St. Mary's River, important as an international boundary, also has a series of spectacular falls and rapids.

Below the straits, the Ocqueoc River in Presque Isle County has the only considerable waterfall. The Au Sable, with its 609-foot drop, is the Lower Peninsula's swiftest river; the Detroit, 2,200 feet in width, is the broadest Michigan stream; the Grand is the longest; the Saginaw (20 miles long), the shortest, although with its tributaries—the Cass, Flint, Tittabawassee, and Shiawassee Rivers—it has the largest drainage basin in the State. All Michigan streams, except in a minor area in the western part of the Upper Peninsula, flow into the Great Lakes system, thence into the Atlantic Ocean through the St. Lawrence River. (This statement does not include water used by the man-made channel at Chicago, which connects with the Illinois River.)

The northern half of the Lower Peninsula and the western half of the Upper Peninsula most strongly impress visitors with the quality

romantically called 'northern.' Unmistakably 'northern' are Mackinac and the larger islands, Beaver, Drummond, and Isle Royale. Rising rockily from the sea-colored waters of the Great Lakes, they are crowned with timbered growth varying in degree of wildness from the virtually untouched fastnesses of Royale to the magnificently groomed Mackinac.

CLIMATE

Michigan is the favored State of the North Temperate Zone, for its climate is thoroughly air-conditioned and thermostatically controlled by the waters of the Great Lakes. Four great expanses of water—Lakes Erie, Huron, Superior, and Michigan—work tempering changes in the prevailing winds and tend to make the State a climatic island in the north Midwest. Whereas in other sections of America climate ignores State lines, in Michigan it conforms closely to the allotted area, because deep water comprises so much of Michigan's boundary. The lakes tend to absorb heat from air warmer than themselves and to warm colder winds.

Outstanding beneficiaries of this climatic largess are the counties of the Lower Peninsula that lie along the Lake Michigan watershed. The prevailing westerly winds, tempered in passage over Lake Michigan, blow cooler in summer and milder in winter, thus admirably adapting the climate to the cultivation of a great fruit belt—a strip about 40 miles wide from the Grand Traverse region to the Indiana State Line. Were the same winds to blow overland from the southwest, and hence remain unmodified by the lakes, they would carry blazing summer heat from the Prairie States across the western expanse of the Upper Peninsula; were they to shift to the northwest, they would intensify the light frosts that frequently touch the north country in the summer months.

The deeper waters of Lake Michigan, which rarely freeze over, remain about 39° F., regardless of the air's temperature, and consequently yield heat in winter to the prevailing winds crossing the lake's 80-mile width. This warmth brings heavy snows and makes excessively low temperatures rare. In spring, on the other hand, the comparatively cold winds retard the budding of fruit trees, usually until all danger of killing frosts has passed. These factors tend toward a longer and more moderate growing season, with ample precipitation, that lasts from April 25 to October 22 (the average dates in Berrien County). Virtually all crops requiring a shorter growing season than cotton may be, and are, propagated in Michigan.

Few winds can find their way into the Upper Peninsula without crossing great reaches of water. The Upper Peninsula has a mean annual temperature of 39° F., as compared with 48° F. in the southern tier of counties in the Lower Peninsula. Temperature range in the Upper Peninsula is 130 degrees (from extreme heat to extreme cold), as compared with 120 degrees in the south. Light frost may be encountered in central portions of the Upper Peninsula in almost any month. Snowfall, because of the latitude, tends to be cumulative and usually exceeds 100 inches annually, being heaviest in the north and west sections. The Weather Bureau's average of snowfall for the Lake Michigan stations ranges from 58 to 61 inches, and from 42 to 47 inches in the interior of the State. Rainfall figures follow similar ratios—34.58 inches for the Upper Peninsula, 32.58 for the southwestern counties of the Lower Peninsula, 28.95 inches for the interior, and 32.91 for the entire State. In nearly all sections, the heaviest rainfall comes between May and October, the season of greatest agricultural need. Thunderstorms are fairly frequent, tornadoes extremely rare.

In common with the rest of the Great Lakes region, Michigan is a meeting point for cyclones and anticyclones. (The terms are used in the meteorological sense, describing circular motion but not connoting violent action.) The cyclonic storms, or low-pressure areas, usually move across the country in a northeasterly direction. In the Great Lakes region, they meet the anticyclone, or high-pressure areas, also moving eastward, but coming from the northwest. This conflict of air currents causes frequent changes of weather—three or four sunny days, succeeded by a day or two of cloudiness or storm; or a cool week followed by a warm one. These changes, taken as a whole, have no appreciable effect upon Michigan's general evenness of temperature, but their presence is a noticeable characteristic.

FLORA

Thousands of forms of plant life, from dry fungi to stately white pines, sprang up in Michigan after the final retreat of the ice sheets, and established a forest, shrub, and herbal growth later called 'the greatest of its kind in the temperate zone.' Even today, Michigan abounds in plant species. In all Europe there are but 80 species of trees, five less than are indigenous to Michigan soil. When the white men came, about 35,000,000 of the State's 36,787,200 acres were heavily timbered with pines and hardwood. Large sections of land that were subsequently

stripped by lumbermen have reverted to the State, and some of the area has been reforested. Millions of acres of Michigan, under scientific guidance, are again 'going wild.'

The Michigan forest is preponderately coniferous, but there is a large scattering of deciduous trees. Hardwoods dominate the woodlands in the southern part of the Lower Peninsula. The most characteristic varieties are the elms, oaks, maples, and hickory. Farther north, coniferous species increase until, in the barrens of the northern part of the Lower Peninsula, jack pine and white birch become predominant, with a lesser mixture of hardwoods. Among its trees, Michigan has an arborvitae, five ashes, a balsam fir, a basswood, a beech, four birches, a blackwalnut, a butternut, a buttonwood, three cherries, a chestnut, three elms, a hackberry, a hemlock, eight hickories, a honeysuckle, a Kentucky coffee tree, a larch, three species of maple, a mulberry, thirteen oaks, a pepperidge, three pines, five poplars, a red cedar, three spruces, a sassafras, a whitewood, and three willows of tree size.

The tree growth of Michigan is festooned with vines, many of which have edible fruits. The abundance of nuts, fruits, berries, and tubers in the forest areas make possible, in season, the almost complete subsistence of man. A person venturing a peripatetic luncheon could, at the same time, revel in a woodland landscape of rich greens and browns, toned and relieved by flowers; but, unless he were a very wary person, he would also stumble upon burrs, thorns, sneeze-producing pollens, and skin-prickling briars.

In the forest, wild grapes of several species sometimes attain great size. Less common are the bittersweet, moonseed, clematis, and several species of smilax. Many showy shrubs form the undergrowth of the more open forests or appear along their edges. The rose, elder, currant, viburnum, blackberry, raspberry, blueberry, and gooseberry are represented by several species, and the woods, fields, and marshes maintain a wealth of beautiful herbaceous plants.

In a single county of Michigan, nearly 100 genera and four times as many species of plants may be found, for no county lacks abundant wild flowering plants. In early spring, even before the tree leaves unfold, many delicately beautiful blooms arise from the forest duff and tint the glades with fresh color. The arbutus, spring beauty, bloodroot, dicentra, adder's-tongue, cress, hepatica, anemone, buttercup, trillium, crane's-bill, phlox, violet, and mandrake are a few of these early arrivals. Somewhat later, and in the more open places, masses of blue lupine, iris, roses, pink phlox, orange milkweed, shooting stars,

and tiger lilies break upon the scene. Still later, the Compositae—sunflowers, rudbeckia, eupatorium, asters, and goldenrod—offer the most brilliant display of the year. Throughout the growing season, mosses and ferns of rich variety and luxuriance provide tonal background for the State's iridescent bouquet. The bogs and swamps that nurture these plants so profusely also produce some of the State's finest hardy orchids: the great showy lady's-slipper, the moccasin flower, the exquisite arethusa, pogonia, and others. Cranberries, andromeda, and other heathlike plants inhabit these bogs, as well as ghostly Indian pipes and curious insectivorous sundews and pitcher plants.

FAUNA

Michigan's thousands of streams and inland lakes are well stocked by State hatcheries. The swift streams of the northern part of the Lower Peninsula and most of those in the Upper Peninsula are favorite haunts of brook, brown, and rainbow trout. Great northern pike and walleyed pike are found in the larger rivers. In the inland lakes, large and smallmouth bass, blue gills, perch, and great northern pike are the common varieties. Michigan grayling was virtually exterminated in the 1880's, but attempts are being made to replace it with Montana grayling.

A fish recently identified with Michigan is the smelt, which each spring charges up the streams emptying into the northern reaches of Lakes Michigan and Huron. The annual smelt runs are checked carefully; bulletins are broadcast over the State; and the catch, from hand-dip nets, furnishes a festive occasion in which thousands of persons take part, particularly along the west coast of the Lower Peninsula. According to the 1935-6 biennial report of the Michigan Department of Conservation, 1,395,250 pounds of these small fish were taken from streams tributary to Lake Michigan in 1935. Other common species of Michigan fish include sunfish, crappies, catfish, and rock bass. Whitefish, lake trout suckers, chubs, and herring make up the largest commercial catches in Michigan waters of the Great Lakes, from which about 30,000,000 pounds are taken annually. Noxious fish include carp, dogfish, and gar pike. More than 500,000 persons are licensed to fish in Michigan annually.

The principal game and fur species native to Michigan include the white-tailed (Virginia) deer, black bear, cottontail rabbit, varying hare, beaver, wolf (the increasing coyote is neither native nor wel-

come), muskrat, skunk, weasel, mink, otter, marten, raccoon, opossum, red fox, badger, and bobcat. Wolves appear sparsely in remote regions of the Upper Peninsula. All elk in Michigan were imported or born of imported stock. The caribou has disappeared as a game animal. The wolverine, the animal for which Michigan is nicknamed, is not among its present fauna; and some scholars believe that the creature may never have inhabited the State.

Despite an annual bag of about 40,000 deer each hunting season, deer are increasing to such an extent that in some sections they are without sufficient winter browse. Bear are fairly numerous in the Upper Peninsula and in the northern portion of the Lower Peninsula. Approximately 50,000 hunters are licensed annually to shoot deer and bear.

Song birds, game birds, predatory birds, and water fowl are found in season in infinite variety. In Delta County, central part of the Upper Peninsula, it is said as many as 250 species of bird life have been classified; most of them are migratory, but considerable numbers remain throughout the winter.

The most important game birds include pheasant, quail, partridge, and wild geese and ducks of many species. The annual kill of cock pheasants is estimated at 750,000, and, although about 400,000 small game hunters are licensed each year, the coveys continue to increase.



Archeology and Indians

WHEN the first French explorers pushed into Michigan, early in the seventeenth century, the country was inhabited by Indians of Algonquian stock. This family embraced a large number of tribes in the northeastern section of the continent, whose language apparently sprang from the same mother tongue.

They were Algonquins who, as Francis Parkman says, in *The Conspiracy of Pontiac and the Indian War After the Conquest of Canada* (1870), 'greeted Jacques Cartier, as his ships ascended the St. Lawrence. The first British colonists found savages of the same race hunting and fishing along the coasts and inlets of Virginia; and it was the daughter of an Algonquian chief who interceded with her father for the life of an adventurous Englishman. They were Algonquins who, under Sassacus the Pequot, and Philip of Mount Hope, waged war against the Puritans of New England; who dwelt at Penacook, under the rule of the great magician, Passaconaway, and trembled before the evil spirits of the White Hills; and who sang *aves* and told their beads in the forest chapel of Father Rasles, by the banks of the Kennebec. They were Algonquins who, under the great tree at Kensington, made the covenant of peace with William Penn; and when French Jesuits and fur traders explored the Wabash and the Ohio, they found their valleys tenanted by the same far-extended race. At the present day, the traveler, perchance, may find them pitching their bark lodges along the beach at Mackinaw, spearing fish among the rapids of St. Mary's, or skimming the waves of Lake Superior in their canoes.'

The Algonquin had resided in Michigan for at least a century before the coming of the whites. Who preceded them, no one knows, although certain archeological finds suggest the bearers of the Hopewell culture, now extinct.

The chief tribes in the Michigan region were the Chippewa, or Ojibway, occupying the eastern part of the Lower Peninsula and most

of the Upper; the Ottawa, in the western part of the Lower Peninsula; and the Potawatomi, occupying a strip across the southern part. None of these tribes, apparently, had exclusive possession of the section it occupied. The Saginaw Valley, in the very midst of the Chippewa terrain, was the stronghold of the Sauk. The Mascoutin had a precarious hold on the Grand River Valley, until the Ottawa, having driven them from the Straits of Mackinac, subsequently drove them beyond the borders of the present State. The Miami, in the relatively populous St. Joseph River Valley, shared a similar fate at the hands of the Potawatomi. Other subtribes that once dwelt in the southwestern part of the State were the Eel River, the Piankashaw, and the Wea, while the Menominee, established in the wild-rice country of Wisconsin, included a part of the Upper Peninsula in their domain.

The Chippewa, Potawatomi, and Ottawa are believed to have descended from an older Chippewa stock, whose original base was north and northeast of Lake Superior. The Miami also are supposed to have split off from the Chippewa, but much earlier than the Ottawa and Potawatomi. Separated into different tribes, the three dominant nations still maintained cordial relations with one another, even boasting a kind of intertribal council; this probably accounts for the fact that few, if any, great battles were fought in prehistoric Michigan.

The tradition of peace was rudely shattered with the penetration of the French and English into the West. Even before the period of actual white settlement, tribal boundaries had shifted as a result of pressure from the Iroquois on the east and the Sioux on the west. The Sauk, reduced in numbers, combined with the Fox and withdrew to Illinois; the Mascoutin and Miami were banished from the region. The Wyandot (or Huron), an Iroquoian tribe east of Lake Huron, were swept from their holdings by other tribes of Iroquois, united in the famous Five Nations. They fled to various parts of the north in 1649 and, in 1680, settled around Detroit.

When Etienne Brulé, the first white man to set foot on Michigan soil, landed at the site of Sault Ste. Marie in 1618, the population of Michigan was about 15,000. The southern half of the Lower Peninsula accounted for about 12,000. The remainder were scattered throughout the beautiful but inhospitable pine forest of the north. Villages were relatively impermanent and, excepting in two or three very populous areas, widely separated from one another. The crude and primitive means of subsistence that the Indians had at their disposal seriously limited the number that a given area could support. The greatest con-

centration of population coincided almost perfectly with the area of deciduous forest. Maple and birch were the two most valuable trees: the first for its sugar, the latter for housing material and canoes. Other sources of food supply, such as game, wild apples, plants, and berries, as well as land suitable for agriculture, were more likely to be found in the deciduous than in the coniferous forest lands.

A majority of Indian settlements were along waterways, as in the St. Joseph and Saginaw River valleys—then the two most populous centers of the present State area. Water provided an easy means of transportation and, in fish, a plentiful supply of food. Some settlements along the Lake Michigan and Lake Superior shores were regularly occupied in summer and abandoned for more-sheltered positions in winter.

The Algonquin were an agricultural people and depended more upon producing vegetables than upon hunting. In Michigan, corn was the staple foodstuff, although wild rice, which was common throughout the State in mud-bottomed lakes and sluggish streams, tended to take precedence in the northwestern section, especially around Green Bay. Corn was often planted in the midst of the forest—the trees having been killed by girdling, to admit the sunlight—together with squash, tobacco, and kidney beans.

Corn was stored for the winter in cribs—similar to those of the present-day American farmer—and in pits (caches) in the ground. Corn, like the land itself, was the property of the family or clan. So deeply ingrained was this notion of communal ownership of land that, when later the Indians agreed to 'sell' it to the whites—oftentimes several thousand acres for a barrel or two of whiskey—they assumed they were simply granting permission for joint use and occupation of the land. It was beyond their comprehension that land could be fenced-off as private property.

To the Europeans, the Indians owed, in addition to spirituous liquors and tuberculosis, the extension of the practice of scalping. Taking the scalp lock of vanquished foes had long been a rite among virtually all North American tribes; but, because it was a difficult operation with crude stone knives, it was, perforce, held within limits. Europeans brought steel knives and offered bounties for scalps, especially during the War of 1812, when the Chippewa sided with the British. Thus, in much the same way that the Michigan Indians were transformed from an agricultural to a nomadic hunting people by the European demand

for furs, they were transformed from a peaceful to a warlike race by the French and English demand for scalps.

The first American to study the Indians of Michigan was Henry Rowe Schoolcraft, who, in 1822, was appointed Indian agent, with headquarters at Sault Ste. Marie. He married Jane D. Johnson, granddaughter of John Johnson, noted chief at the Sault. From the works of Schoolcraft, Longfellow derived most of the material for his *Hiawatha*. Much may be learned of the earliest habits, customs, and songs of the Chippewa from Frances Densmore's recent studies, though she was concerned with the Plains Chippewa, who had lost some of their woodland culture.

The basic political unit of the Indians was the tribe, consisting of people speaking the same dialect, occupying contiguous territory, and having a feeling of relationship with one another. The chief was elected, to hold office until he died or the electorate became dissatisfied with his leadership and chose another. Often a son was chosen to succeed his father. Besides the chief, there were other dignitaries, notably the priests, an advisory council of minor chiefs, and sometimes a special war chief.

Indian society was based on the gens or clan, tracing its descent usually through the maternal line. Ritualistic ceremonies accompanied most forms of social activity. Criminal offenses were punished by the gens, which was held responsible for the acts of each of its members. Trial for murder consisted of attempting to obtain the forgiveness of the friends and relatives of the victim. Failing that, the murderer was executed.

Within the Indian community it was customary for the women to do the gardening, cooking, and housekeeping; and the men engaged in hunting, fishing, tool making, and, when necessary, fighting. Medicine was the exclusive province of the priesthood, who also, logically enough, officiated at burials. These consisted either of interment near the village, without a marker or with houses of bark and wood over the graves, or of interment in mounds, large and small. The most important society among the Chippewa was the Mide, which conducted religious and magico-medical ceremonies in long lodges.

A Michigan custom, rarely encountered north of Mexico, was the trephining of skulls. The perforation was usually directly in the center of the vertex, and most of the specimens discovered show it to have been performed after death. Nevertheless, there is in the University of Michigan Museum a specimen showing evidence of a well-advanced

healing process around the edges of the opening that could have gone on only during life.

The Indians of Michigan were housed in dome-shaped bark- or mat-covered lodges in winter, and in rectangular bark houses in summer. Among the Chippewa, the summer residence was the conical skin or bark-covered tepee, popularly associated with Indians in general. Homes were furnished with wood and bark vessels, some splint basketry, woven bags for storage, reed and cedar-bark mats, and copper tools and utensils; a hole in the roof permitted egress of smoke from the cooking fire. Native pottery was of a primitive order, as was work in wood, stone, and bone.

The men wore leggings, breechcloths, and sleeved shirts—all made of animal skins; while the women wore skirts and jackets of the same material. Moccasins were soft-soled, with drooping flaps. Robes of skin served for additional protection during cold weather and as blankets at night.

The early residents of Michigan were great travelers. Travel by water especially was common, a natural circumstance in an area with an extensive coast line. The rivers maintained a regular flow, in those days, because of the standing forest, and the light Indian canoes could be propelled to their uppermost reaches. By paddling to the source of an eastward-flowing river, leaving the water for a short portage, and descending a westward-flowing river, the Indians could, and regularly did, cross the State at several places. The portages were used later by their European successors.

An even more important legacy was the network of Indian trails, which became the routes by which French *coureurs de bois*, English and French fur traders, and settlers from New York, New England, and Virginia penetrated the forests. Some still survive as modern highways, notably the Saginaw Trail from Toledo through Saginaw to Mackinac, part of which forms the modern Dixie Highway (*see Tours 5 and 11*); the Grand River Trail between Detroit and Grand Rapids, whose route is now followed by the trunk line US 16 (*see Tour 4*); the St. Joseph Trail out of Detroit, now known as US 12 (*see Tour 2*), and the Sauk Trail, which followed roughly the line of present US 112 between Detroit and Chicago (*see Tour 1*). The Upper Peninsula was traversed from northeast to southwest by the Sault and Green Bay Trail, the course of which is now followed by US 2 and State 35 (*see Tours 16 and 19*). From these major thoroughfares branched numerous minor trails; and many of these also persist as State and county roads.

Along these trails, archeologists have been able to identify 1,068 mounds, 82 inclosures and embankments, 31 so-called 'garden beds,' 748 village sites, and 265 burying grounds. Other material cultural remains include evidences of prehistoric copper mining in the Keweenaw Peninsula and on Isle Royale (*see Isle Royale*) and a host of miscellaneous artifacts, such as arrowheads, hammers, knives, drills, hoes, spades, pipes, fragments of pottery, and large and small effigies in stone. Most of these are distributed throughout the State in amateur collections and have not been classified.

Among the earliest researchers into Michigan archeology were W. L. Coffinberry and Henry Gilman, who made rather extensive investigations during the last half of the nineteenth century, while the most recent work is being conducted by Dr. E. S. Greenmaun, of the University of Michigan Museum staff. Perhaps the greatest contribution to the archeological knowledge of the State has been made by Dr. Wilbert B. Hinsdale, head of the Great Lakes Division of the University of Michigan Museum of Anthropology. Unfortunately, all of these researches were begun after the land had been cultivated for many years. Consequently, most of the prehistoric mounds had disappeared. The plow that leveled earthworks also uncovered artifacts, which were looked upon merely as curiosities by their discoverers. Few if any records were kept of the source of a particular article or of other articles that may have been associated with it. As a result, archeological knowledge of Michigan is exceedingly meager.

Discoveries that have been made, however, indicate that mound building was a rather general practice among the aboriginal inhabitants, the purpose being usually interment of the dead. By far the greatest number of mounds have been discovered in the southern half of the Lower Peninsula, in a triangle having the Indiana-Ohio boundary as its base and the head of Saginaw Bay as its apex.

One of the largest mounds was on the Rouge River, at what is now Delray. As described by Bela Hubbard, in his *Memorials of Half a Century*, it was 40 feet high and several hundred feet long. It gave evidence of having been used for burial by successive generations, and possibly by successive tribes, as the soil containing skeletons was evidently stratified. Some mounds formed effigies, many of which were serpentine in shape; others were surrounded by enclosures, or associated with them.

Enclosures usually consist of circular or elliptical embankments, from two to five feet in height, about an area of one acre or slightly

more. Sometimes they are surrounded by a moat, hence the belief that they may have been forts. Some show evidence of not having been used for more than 250 years. In addition to the mounds and enclosures, ditches and pits, large and small, are among the most common earth-works as yet undestroyed. The pits were most frequently used for cooking and for storage, some yielding up kernels and ears of corn preserved from decay for years, perhaps centuries.

Far more remarkable than the mounds, which would not seem to require unusual skill to build, were southern and western Michigan's garden beds, all of which have been destroyed by agricultural operations. These most mysterious of all North American antiquities consisted of low ridges of soil about 18 inches high, arranged in almost perfect geometric patterns, and covering as much as 120 acres. They were given their distinctive name because they resembled beds in a formal garden, but there is no evidence of their having been used for that purpose. Indeed their function is a mystery: it is not known whether they had a ceremonial purpose or were intended simply as artistic designs, worked in the most accessible medium, the soil, to be contemplated from an adjacent hill. No implements have been found near them, no pottery, arrowheads, or pipes. Indications of human occupation of the immediate vicinity are almost completely lacking. Certainly they were abandoned long before the arrival of the French. Except for a few reported in Indiana and Wisconsin, they have been found only in Michigan.

Michigan's unique contribution to archeology is found in the ancient copper mines of the Lake Superior region. The Indians were made aware of the existence of the metal by masses of float copper carried south by the glaciers and left lying on the surface. Sometime in the remote past, an unknown tribe began to mine the native copper in the Upper Peninsula. They dug pits in the ground and separated the copper from the stone by hammering, by the use of wedges, and, possibly, by the use of heat. Thousands of hammers have been found in and about the old pits, some grooved for hafting. Copper from these mines was widely distributed throughout the country, and it is probable that numerous tribes made summer pilgrimages to the Upper Peninsula to get supplies of the precious metal.

Besides mining copper, the natives quarried stone to a certain extent, although a great deal of the stone for arrowheads and spearheads came from other areas, chiefly Ohio. Some was imported from beyond the Rocky Mountains. Michigan cherts and flints are generally drab in

color, coarse-grained, and often marred by fossils, blemishes, and flaws. The richest source of supply was around Saginaw Bay. Heavy stones for axes and celts were plentiful along the banks of streams and lakes. A gray stone, from which pipes were made, is reported to have been quarried in the vicinity of Keweenaw Bay.

Stone implements peculiar to the Great Lakes area are the fluted ax and the faceted celt. Rude mortars and cylindrical pestles are common, as are the grooved ax and celt, adz blades, tobacco pipes, tubes, and the usual range of ceremonial and talismanic objects. Among the latter are the small stone effigies called 'bird stones,' found only in this area.

Pottery, as previously noted, was weakly developed. Many of the discovered specimens appear to have been importations; a few may be identified as Hopewell. Rock carvings and drawings are rare, limited apparently to some crude carvings along the north branch of the Cass River in Sanilac County, and some red paintings in a limestone cave at Burnt Bluff, near Fayette in the Upper Peninsula.

To the land-hungry pioneers who poured into Michigan during the early nineteenth century, the Indian was not a romantic figure. He was a nuisance. Bullets, rum, and treaties, hardly worth the paper their terms were written on, were used without compunction to rid Michigan of its Indians and open the land to the farmer, the road maker, the lumberman. Of all these methods, the treaty was the most effective. The commissioners who negotiated the treaties may have intended to treat the Indians fairly, but, more often than not, their recommendations and promises were altered by a Congress less concerned with the needs of the aborigines than the demands of would-be settlers and land speculators. In almost every instance, the Government failed to live up to its obligations. Later, the natives were rounded up without benefit of treaty, and conducted, under military escort, to lands beyond the Mississippi.

When forced migration began, some Indians escaped to Canada, while others, in scattered bands, moved north or west before the advancing settlers. The remaining Chippewa, Ottawa, and Potawatomi gravitated toward the Upper Peninsula and the northern part of the Lower Peninsula, where, for a while, the pressure upon them was less intense than in the more densely populated counties. Here the broken remnants of the tribes endeavored to adjust themselves to their altered status. They did odd jobs and made souvenirs; they fished and hunted, usually to supply their own needs, sometimes for commercial profit.

Many retired to a dispiriting existence on reservations, which, until a recent date, were indifferently managed.

In the Upper Peninsula, a reservation comprising the settlements at L'Anse, Ontonagon, and Lac Vieux Desert (*see Lac Vieux Desert, Tour 20*) was created in 1854. In the Lower Peninsula, under agreements reached in 1855 and 1864, the Isabella Reservation was set aside. In both these instances, the land was actually reserved for the exclusive use of the members of these groups and was in part owned by them. Subsequent legislation, however, permitted them to sell their allotments, and today they own only a small part of the reservations.

Tribal village sites of bygone days, and fishing grounds, as well as the white man's farming communities and lumber towns, were natural centers for non-reservation Indians. Many of the straggling settlements they established are still in existence. Some of these, such as the Wilson-Harris Community (*see Hannahville, Tour 16*) and the Bay Mills Community (*see Tour 18*), are classed as tribal reserves, the land being held in trust by the United States Government for the benefit of the members of the communities. Other groups residing on Sugar Island and Drummond Island (*see Tour 17*) are eligible for membership in the Bay Mills Community, but as yet no adoptions have taken place.

When the first reservations were established, the Government undertook to maintain schools for the natives; but had it not been for the efforts of Roman Catholic and Protestant churches, education would have been a dead letter for many years. Indian children still receive instruction at mission schools established between 1829 and 1840, some of them with the aid of Government subsidies. A non-reservation school at Mount Pleasant, operated by the Government since 1891, was taken over by the State in 1927, but was closed in 1934.

In 1927, the Bureau of Indian Affairs withdrew its representatives from the State. Few natives then owned property held under Government supervision; most of them were voters and taxpayers—non-ward citizens, whose tribal affairs had been terminated. But the suffering of the Indians during the depression that began in 1929 became so acute that a field aid was stationed at Baraga, and an Indian Service social worker was assigned to the State.

In 1930, the Bureau of the Census enumerated 7,080 Indians in Michigan, 1,214 of them full-bloods. The reservations had a population of 2,404, of which 1,263 were eligible to vote. According to the *Statistical Supplement to the Annual Report of the Commissioner of*

Indian Affairs, for the year ending June 30, 1939, there were then 4,530 Indians in the State, under the jurisdiction of the Great Lakes and Tomah agencies (Wisconsin). Of these, only 579 were on the current census roll. Most of the reservation Indians are manual laborers, others own small businesses or pursue professional occupations, while a limited number depend for subsistence upon casual labor, supplemented by the sale of homecraft goods.

The Indian Reorganization Act of 1934, an outgrowth of the Government's changed attitude towards its wards, is already showing beneficial results; but only a small part of the Indian population has been affected. More than half the Michigan Indians are members of agricultural and industrial communities. The Act contemplated decreased Federal control, vastly greater self-government for the Indians, and closer co-operation of the Indian Office with such agencies as Soil Conservation Service and State departments of education, conservation, and welfare. A remarkable feature is the provision that only those tribes that elect to do so come under the new program. The act provides: end of the allotment system, protection of Indian lands from further loss, and purchase of other lands; self-government and incorporation of tribes, under Federal guardianship; establishment of scholarship fund and revolving fund to help incorporated communities; and special rules governing entry into Indian Service.

Floyd W. LaRouche, former Michigan newspaper editor and now with the Indian Office, writes in the *London Times* (United States Number, June 1939): 'The Indian has gained new stature . . . he is, in States that have denied him, winning the right of suffrage . . . his arts, religion, language, dances, ceremonials, handicrafts are reviving. He is finding it is honorable to be an Indian. And America is richer because this is true.'



History and Government

THE early history of the territory now within the State of Michigan forms an important chapter in the story of France's attempt to found an empire in America. Several years after Champlain established the settlement of Quebec (1608), he sent Etienne Brulé westward in search of the legendary passage to Japan and China. Brulé reported that he reached the region now known as Georgian Bay in 1612. On a subsequent expedition (1621), he is believed to have passed through the rapids of Sault Ste. Marie and partly explored Lake Superior, the 'Great North Sea,' where he found the Huron Indians mining copper.

Jean Nicolet, next to be sent out by Champlain to find the Northwest Passage, journeyed through the Straits of Mackinac in 1634. He visited the site of Sault Ste. Marie and explored the country west of Green Bay on upper Lake Michigan.

Hard on the heels of the French explorers came the *voyageurs* and *coureurs de bois*, an adventuresome group composed of soldiers of fortune, gentlemen of no fortune, and plain vagabonds. These woodsmen numbered 800 by 1680, when the entire population of Canada was about 10,000. They fraternized with the Indians, married squaws, and were instrumental in fostering the enduring friendship that existed between the French colonists and most of the tribes with which they came in contact.

In 1826, an Indian chief, lamenting the change to American conditions, said:

When the French arrived at these falls, they came and kissed us. They called us children and we found fathers. We lived like brethren in the same lodge and we always had wherewithal to clothe us. They never mocked at our ceremonies, and they never molested the places of our dead. Seven generations of men have passed away and we have not forgotten it. Just, very just were they toward us.

There was one notable exception, however, to this peaceful understanding. Champlain's support of the Hurons against their traditional

foes, the Iroquois of New York and Ohio, drove the latter to espouse the English cause. The warlike attitude of the Iroquois barred the French from all access to the south and compelled them to shape their course westward, up the valley of the St. Lawrence, toward the Great Lakes and the Northwest.

The zeal of the French missionaries sprang from sources far removed from those that actuated the *voyageurs* and *coureurs de bois*. Inspired by a tranquil faith and determined to convert the Indians to Christianity, such men as Fathers Marquette, Hennepin, Claude Allouez, and René Mesnard played major parts in the exploration and settlement of Michigan. They and their fellow missionaries endured incredible hardships and privations with astonishing fortitude. Many of them, while on the way to their posts, were captured by hostile tribesmen; some escaped, others were tortured and burned.

Two Jesuit priests, Charles Raymbault and Isaac Joques, were invited by the Chippewa to the site of Sault Ste. Marie, in 1641, to preach the gospel to about 2,000 natives gathered there (*see Sault Ste. Marie*). The first regular mission on Michigan soil was established at Keweenaw Bay in 1660 by Father Mesnard, Jesuit missionary, who spent the winter on the shore of Lake Superior.

Father Louis Nicholas was sent to Sault Ste. Marie in 1667 as resident priest. Also at Sault Ste. Marie, Father Jacques Marquette, explorer of the upper Mississippi, founded in 1668 the first permanent settlement in Michigan. Three years later, at St. Ignace, on the north shore of the Straits of Mackinac, he established a mission among the Huron. Father Marquette spent the remainder of his life in arduous journeys to Indian villages in Michigan, Wisconsin, and Illinois. On his way back to St. Ignace, he fell ill and died near the site of the present city of Ludington, May 18, 1675, in his thirty-eighth year.

That the missionaries' labor did not produce lasting results was owing in large measure to the policy of the ministers of the French crown, who, dazzled by the immediate rewards to be derived from the fur monopoly, gave scant encouragement to establishment of self-supporting communities. Thinly scattered over thousands of leagues, French missionaries and traders did little more than set up outposts of civilization in a wilderness. After them came the soldiers and the administrators.

The first military post was built at St. Ignace in 1671. Fort de Buade, which soon became known by the Indian name Michilimackinac, was erected on this site, but the exact date of its construction is

not known. The fort was in existence in 1679, when La Salle visited St. Ignace in the *Griffon*. La Salle erected Fort Miami, at the mouth of the St. Joseph River, in 1679. In 1690, a Jesuit, Father Aveneau, explored the upper reaches of the stream and established a mission on the site of the present town of Niles. Here, to protect the mission, the military authorities in 1697 built Fort St. Joseph—not to be confused with a fort of the same name erected in 1686, by Daniel Greysolon (Sieur du Lhut), at Port Huron and abandoned two years later.

In 1694, Antoine de la Mothe Cadillac was appointed commandant of the Michilimackinac post, which had become the most important trading center in the whole Northwest. From his point of vantage, Cadillac perceived that different methods were necessary to hasten development of the country and to circumvent the English, whose agents, seeking control of the Michigan area, constantly incited Indians to rise against the French and made illicit bargains with unscrupulous fur traders, to the detriment of the monopolists. Cadillac went to France in 1699 and obtained authorization to establish a fortified settlement at the 'place du detroit'—the place of the strait. On July 24, 1701, he and a party of more than 100 reached the wooded shores of the strait where Detroit now stands; on that day the history of Michigan's development actually began.

The fortified community established by Cadillac and his men was named Fort Pontchartrain, in honor of the Minister of Marine. Six thousand Indians of various tribes set up villages in the vicinity of the fort, which within a year attained major importance as a trading post. Notwithstanding its prosperity, the administrative expenses, borne by the government of the mother country, were so heavy that on several occasions there was talk of abandoning the settlement.

Cadillac had been promised full authority in this region, but on October 31, 1701, the Company of the Colony of Canada was granted the exclusive right to trade at Detroit. The following year the fur trade was wrested from Cadillac. The dispute that arose was settled in 1706, when Cadillac was given control of the trade of the strait, and the company was accorded similar privileges in the remainder of the Michigan Peninsula.

Hampered by the rigid control exercised by the ministers at Versailles, Cadillac's position was made still more difficult by the hostility of the missionaries. Sale of liquor to the Indians was a source of endless friction between the church and colonial officers. Charges were brought against Cadillac in 1704, and he was detained many months

at Quebec before being exonerated. In 1710, he was removed, 'by promotion,' to the governorship of Louisiana, where he carried out some of the plans he had contemplated for Fort Pontchartrain.

After his departure, Fort Pontchartrain, or Detroit, as the settlement was beginning to be called, underwent 20 years of mismanagement at the hands of inefficient and sometimes venal commandants. Trade declined, a large number of settlers left, and one commandant foolishly reduced the fort to about half its original size, leaving many outlying householders exposed to British-inspired Indian raids that began in 1712.

No serious attempt was made to reorganize administration of the settlement until 1729, when Robert Navarre, sub-intendant, was appointed to discharge certain limited notarial duties. This first instance of the exercise of civil jurisdiction within the borders of Michigan, reflecting a new policy on the part of the absentee rulers, proved a welcome diversion from military absolutism.

Though there were frequent alarms and occasional raids by Indians, the population of Detroit increased steadily. Many of those who arrived during the 1730's and 1740's settled outside the town. They were loath to go far inland, and, since the lands directly east of the community were already taken by the French settlers (*see Detroit*), while those to the west were set aside for friendly natives, many of the newcomers crossed the strait to farm the rich lands opposite Detroit. About 650 inhabitants, including 100 soldiers, lived in Detroit proper in 1750.

Growth of the strait community and the expansion of the farm lands in its immediate vicinity were checked by the outbreak of the French and Indian War in 1754. Although Michigan was somewhat removed from the fighting zone, many of its inhabitants took part in campaigns in Ohio and western Pennsylvania. The war ended in 1760 with the French surrender to the English at Montreal. Martial law prevailed throughout the territory until ratification of the Treaty of Paris in 1763.

Major Robert Rogers, leader of a band of Rangers who had served the British as scouts, raiders, and envoys in Indian affairs, was sent out to receive the surrender of Detroit. He entered the town November 29, 1760, after taking other fortifications along the Great Lakes. The following month he went East, leaving Captain Donald Campbell as first British commandant of the post.

French inhabitants offered no opposition to the new regime, which

they looked upon as temporary. The Indians, however, bitterly resented the domineering ways of the English, and the outrages they committed kept the district in a state of turmoil for years. Their enmity finally crystallized around the person of Pontiac, Ottawa Confederacy chieftain, who organized the most far-reaching alliance of tribes ever attempted. Even among those Indians living near Detroit, many were sufficiently disgruntled to enter the conspiracy. Their resentment against the British was heightened by a decree issued by the Quebec authorities and put into force by Major Henry Gladwin, then commandant, forbidding liquor sales to Indians.

On May 7, 1763, Pontiac's followers walked into the fort at Detroit, with sawed-off muskets hidden beneath their blankets. Their contemplated surprise attack failed, however, for Major Gladwin had been warned.

Every other post between the Straits of Mackinac and western New York fell to the Indians (*see Mackinaw City, Tour 11*), but Detroit held off a besieging force of approximately 900 for five months. With great difficulty and loss of life, the water route to Niagara was kept open, and on three occasions men and supplies were shipped in. None the less, the fort's resources were almost exhausted when, in October, many of Pontiac's warriors were forced to leave for their hunting grounds to obtain food, and the siege was virtually raised. The rebellion petered out when Pontiac became disheartened, not only by his failure to take Detroit, but by British recapture of the other forts and the belated news of peace between England and France, which put an end to his hopes of French intervention.

Four separate governments for the administration of England's enlarged possessions were established after the signing of the Treaty of Paris. These governments were called the Quebec, East Florida, West Florida, and Granada departments. Michigan was included in the Quebec department. Detroit, however, was overlooked until the following year, 1764, when it was decreed that the civil law of France should be retained, and the British code of criminal justice added.

In point of fact, a modified form of martial law prevailed until 1775, when Henry Hamilton, on November 9, arrived at Detroit. As lieutenant governor, he was the first civil officer of the English period, and assumed almost unlimited administrative and judicial powers.

Michigan took the first step toward self-government when Detroit merchants petitioned for permission to establish a court of arbitration. Eighteen of these men agreed that each week three of them,

chosen in rotation, should constitute such a court. This volunteer court rendered judgments, issued executions, and condemned culprits to imprisonment in the guardhouse. Its work was so satisfactory that a similar court was set up at Fort Michilimackinac.

During the first decade of British occupation, the fur trade in Michigan grew to tremendous proportions. When the British took over Detroit in 1760, storehouses were found to contain half a million dollars' worth of furs. The French yearly export of skins at Canadian evaluation was estimated, as early as 1670, at 300,000 francs gold; by the time of British ascendancy, the annual trade at Detroit amounted to about 200,000 pelts. A large proportion of these were beaver, used as a standard of exchange in all transactions during the French, English, and early American administrations.

Shortly after British occupation, instructions had been given to disarm the French inhabitants, an action that would have deprived them of their livelihood had the order not been modified to apply only to those whose loyalty to the English order of things was suspect. This was sufficient, however, to give the British a monopoly of the fur trade, and within a few years they were in complete control; while the Canadians, as the French were called, were driven either to live on their farms or to join the Indians in the chase.

The British prized this rich traffic so highly that everything was done to discourage permanent settlement, which would have destroyed the forests and therefore the fur trade. By royal proclamation, it was decreed unlawful to survey or acquire land, either by patent or grant, or to purchase it from Indians.

The outbreak of the Revolutionary War further delayed settlement in Michigan, except in the Detroit area, where about 3,000 persons were living by 1779. The French in Canada and the French-Americans in Michigan did not share the New England colonists' desire for independence and were largely out of sympathy with the American cause, for the Quebec Act of 1774 had given citizens of French descent many rights and privileges denied to New Englanders.

Michigan was drawn into the Revolutionary War on the British side when Lieutenant Governor Hamilton obtained permission to attack the Americans to the southward. Unpopular in Detroit because of his high-handed rule, Hamilton had been indicted and charged with a number of illegal acts, including unlawful execution. Although he was later freed by a Montreal grand jury, he was nevertheless eager to get away from his post in Detroit. He rounded up Indian warriors

and led them in raids against frontier settlements in the Ohio Valley and in western Pennsylvania.

One of the first influential Americans to become aware of the gravity of this situation was George Rogers Clark, who realized that there would be no respite for the settlers so long as the English maintained a secure position in the North. He obtained from Governor Patrick Henry and the council of Virginia approval of a plan for the capture of British forts in the Illinois country. His campaign is one of the thrilling exploits of the Revolution. He captured the important posts at Kaskaskia, Cahokia, and Vincennes. At the last-named place, Lieutenant Governor Hamilton himself was taken prisoner. Furthermore, through the agency of Father Gibault and other prominent citizens, Clark won to the American cause all residents of that western region.

The British at Detroit were so alarmed by the news of Clark's success that Fort Michilimackinac was moved from its position on the mainland to the island in the Straits of Mackinac. Military columns were dispatched from Detroit to drive the Americans from the Northwest country, but they accomplished nothing. One band captured a small, harmless settlement of Moravians on the Muskingum River in northern Ohio and, after maltreating them all and killing many, brought the leaders to Detroit. There they came before Colonel Arent Schuyler de Peyster, who was in charge of the Detroit post. He was inclined to believe their protestations of neutrality, but, to be safe, he assigned them a new home on the Clinton River, near the present city of Mount Clemens, where they remained until 1786.

During the war, the English found the cost of Indian co-operation—which in some cases amounted to no more than quiescence—expensive, indeed. In 1779, rum provided for Indians at Detroit amounted to 17,520 gallons, and gifts of goods and cash in one year totaled 123,902 pounds sterling.

During this period, Fort St. Joseph, on the site of the present town of Niles, was destined to change hands several times. Surrendered to the British in 1761, the fort had been attacked and captured in 1763 by the neighboring Indians participating in Pontiac's uprising. It was returned to British control the next year, but was not garrisoned again until late in the Revolution, when a handful of soldiers was placed there to guard some supplies. In the fall of 1780, a force of Frenchmen and Indians from Cahokia, in the Illinois country, raided the fort. Loot to the value of about 62,000 *livres* in goods and merchants' property was taken. An English officer in the vicinity recalled a band of

local Indians from hunting and overtook the raiding party, killing several and capturing others.

A second expedition against Fort St. Joseph was authorized by the Spanish commandant of St. Louis, to demonstrate to his Indian allies that the Spaniards were more powerful than the British, thereby hoping to retain their loyalty. Volunteers for the expedition were not difficult to enlist, because of the possibility of booty and revenge for the earlier defeat. Some 60 Spanish and French, with as many Indians, under the command of Don Eugene Poure, left St. Louis on January 2, 1781. The party surprised Fort St. Joseph on February 12 and made prisoners of all persons found there. The Spanish flag was raised and an annexation proclamation read. Next day the raiders departed, and the fort reverted to British possession.

The Revolutionary War was closed by a preliminary treaty in 1782. In the following year it was required that the armies, garrisons, and fleets of England should withdraw from the United States with all convenient speed. The boundary between Canada and the new nation was drawn 'from the point where the 45th parallel cuts the St. Lawrence River, along that river and the chain of lakes and connecting waters to the Lake of the Woods, and thence west to the headwaters of the Mississippi, and down along the middle of that river to latitude 31.'

The English, however, were in no hurry to quit the northern posts. They were anxious to retain their monopoly on the fur trade in the lakes region and to maintain hunting grounds for their Indian allies, who, if dispossessed by the Americans, would look to Canada and England to furnish new lands. These reasons were not openly mentioned; rather, the English informed the Continental Congress that they intended to hold the posts because the United States Government had not carried out its part of the treaty by compensating the Loyalists for losses they had suffered during the Revolution; their hope was that the Ohio River, not the line through the Great Lakes, would become the boundary.

To complicate matters, it was found that many of the original colonies held claims in this region. Massachusetts, Connecticut, and New York cited old charters from the British crown, establishing overlapping claims to all lands west of their boundary lines to the Mississippi; while Virginia made claims in the Northwest, because its statesmen and soldiers had created a county in the Illinois country and had maintained civil jurisdiction there. By 1786, however, in the interest of

the commonwealth, all colonies surrendered their western claims to the new government.

Detroit continued under British jurisdiction for 13 years. In 1791, an act was passed that brought about a radical change: the Province of Quebec was divided into the two provinces of Upper and Lower Canada, and constitutional representative government was established in each. The government comprised a governor, an advisory executive council, and a legislature consisting of an appointive legislative council and an elective house of assembly. Detroit, including the farm settlements on both banks of the strait, held its first election in 1792, naming three of the 16 members allotted to the House of Assembly in the Parliament of Upper Canada. A second election was held in 1794. This was the last under British rule, for in 1796 England withdrew from United States territory. Even in Detroit's first election there appeared phenomena that have become commonplace in American politics. One of the successful campaigners spent the equivalent of \$660—for those days a large amount—most of which went for 'sundries' such as rum, ribbon, and roast ox, lavished upon those whom he referred to as 'peasants' and 'the mob.' He is quoted as remarking, 'The more broken heads and bloody noses . . . the more election-like.'

While the United States was making plans for the Northwest, the English at Detroit were buying Indian co-operation in their attempt to keep the United States from occupying Michigan. So, throughout the northwest, another war upon scattered settlements began.

The United States realized that protection must be given to the pioneers, but the first attempts to send Federal forces into the territories failed in 1791. Finally, General Anthony Wayne was appointed to recruit and command an army of 5,000 men. Wayne did not march into Michigan at once but maneuvered in northern Ohio, where the threat of border warfare was most menacing. Here he led his troops, in August 1794, in the decisive Battle of Fallen Timbers, near the present Toledo, which put an end to the enemy's aggressive tactics. This was followed by the Treaty of Greenville, Ohio, August 3, 1795, when the tribes ceded to the new government a great portion of the Northwest Territory and a few allotments of Michigan lands, required for the protection of the Detroit and Michilimackinac posts.

The United States had now won this land twice—once by war with England, and again by conquest and treaty with the Indians—and still it was not in complete possession.

General Wayne remained in Ohio while John Jay was in Europe

negotiating the final treaty, by which England reluctantly agreed to relinquish its claims to the northwest lands. The British surrendered Detroit on July 11, 1796, and at noon General Wayne's advance guard, under Captain Moses Porter, ran up the Stars and Stripes—the third flag to be raised above Detroit.

The Ordinance of 1787, next to the Declaration of Independence and the Federal Constitution the most important document in early United States history, was formulated and adopted by the Congress of the Confederacy, while the convention was preparing the Federal Constitution. It was a remarkably thorough instrument for territorial government and has since been applied, though not in its entirety, to every other territory. By its provisions, constitutional authority was delegated to a territorial governor and three judges, appointed by the President. After 1789, when the First Congress of the United States ratified the Ordinance of 1787, the governor and the judges adopted the laws, which the judges, as the highest judicial body, enforced. The ordinance also contained provisions for religious liberty and for a bill of rights; furthermore, it specified that education should receive every encouragement. It stipulated that no less than three States, or more than five, might some day be formed in the so-called Northwest Territory; that these States should forever remain a part of the confederacy and share privileges and obligations with the other and older States; that the navigable waters and 'conveying places' should remain forever free; and that slavery never should be permitted. The States of Ohio, Indiana, Illinois, Michigan, and Wisconsin were destined to be carved out of the Northwest Territory and added to the Union. The capital of the Territory was situated at Marietta.

In the division of the Northwest Territory, the Michigan section, which constituted a single county called Wayne, included all of Michigan as now defined except the western end of the Upper Peninsula, that part of Wisconsin drained by Lake Michigan, a strip across northern Indiana, and a strip of land running along the northern boundary of Ohio. This strip, eight miles wide in the east, diminishing to five miles in the west, included the site of Toledo. In each of the years 1798, 1799, and 1800, Wayne County sent a delegate to the General Assembly of the Northwest Territory held at Chillicothe.

Indiana was declared a territory in May 1800, with Vincennes as its capital and General William Henry Harrison as its governor. In the realignment of territorial borders, in that year, Indiana extended northward to the Straits of Mackinac and included the western half of

Michigan's Lower Peninsula. The eastern half was attached to Ohio. Although Ohio had not quite attained the 60,000 population required for statehood, Congress, nevertheless, authorized it to adopt a constitution, which was accomplished in 1802.

In 1805, Congress organized the Territory of Michigan, with Detroit as the capital and the Ordinance of 1787 as the territorial charter. General William Hull, of Massachusetts, was the first governor; Stanley Griswold, the secretary; Augustus B. Woodward, of Washington, D. C., and Frederick Bates and John Griffin, both of Virginia, the judges. Judge Griffin arrived almost a year later than the others, being appointed only after another man had refused to accept.

General Hull had intended his inaugural to be accompanied by all befitting pomp and solemnity, but, when he reached the capital of Michigan Territory on July 1, 1805, all he found was a pile of embers marking the emplacement of the fort and the little village. Fire had destroyed the settlement.

His first duty was to install officers, name justices, establish courts, and fix routines; his next, to make some provision for the shelterless inhabitants. Accompanied by Judge Woodward, he journeyed to Washington to urge immediate assistance. In April 1806, Congress authorized the governor and the judges to lay out a new town, appropriating 10,000 acres adjacent to the old fort.

Judge Woodward laid out plans for a city on a grander scale than L'Enfant's designs for Washington. He was a man of high intellectual caliber, but so stubborn and argumentative that he was often in conflict with his contemporaries and in sharp disagreement with his immediate superior, the governor. His city plans aroused the derision of the people of Detroit. For a long time, life in the community was enlivened by the citizens' acrimonious jibes at the judge, and his picturesque rejoinders.

Fur pelts still were the standard of exchange in the opening years of the nineteenth century. As Detroit developed, pelt currency was supplanted by bills issued by merchants on their produce, but the practice of issuing such bills was soon abused. In 1806, Governor Hull, inspired by six Boston 'financiers,' prevailed upon the legislature to authorize incorporation of the Bank of Detroit, Michigan's first bank. Assets consisted almost entirely of the individual credit of Michigan investors. Judge Woodward was elected president.

Hull, ignorant of banking, subscribed to 5 per cent of the stock in behalf of the Territory, while the Boston promoters took the remaining

95 per cent and disposed of it here and in the East, at large discounts. The bank was momentarily saved when the directors decided to make good a note issue of \$165,000; but, victimized a second time by a Bostonian, it was not long until the institution found it had a total note issue of \$1,500,000 outstanding in Detroit and discounted in the East.

Congress, cognizant of the dubious methods of financing in progress at Detroit, authorized Judge James Witherell to investigate. As a result of his report, a legislative quorum, consisting of Governor Hull and Judge Witherell, enacted a new statute during Judge Woodward's absence, which provided severe penalties for banking operations other than those it expressly permitted. The Bank of Detroit was outlawed. When Woodward returned, he furiously demanded exemption for his bank, but this was refused, and it closed early in 1808.

This scandal made the little town notorious, and it was years before the episode was forgotten. Nevertheless, the need of banking facilities was so real that the legislature in December 1817 passed an act for incorporation of the Bank of Michigan. The bank successfully served the Territory and State for 24 years through its main office at Detroit, and its branch, the first in the State, at Bronson, Kalamazoo County.

A helpful influence was extended during this difficult period by a Sulpitian priest, Father Gabriel Richard, pastor of Ste. Anne's parish. He contributed greatly to the educational, social, and political development of Michigan. He, with the Reverend John Monteith, Episcopalian, was largely responsible for the chartering of the University of Michigan, in 1817, and was the only Roman Catholic priest ever to be elected to the United States Congress (*see Social Institutions; also Detroit*).

Since the close of the Revolutionary War, the Territory had never been free from the intrigues of English agents and fur traders, who, working among the restless Indians, constantly harassed the American Government. At the Treaty of Detroit, held under Hull in 1807, the United States had obtained title to a large part of southeastern Michigan. By 1809, many Indians had begun to understand the meaning of the agreement, and their temper became uglier, their enmity bolder. This was a contributing factor to the War of 1812. Michigan was a prize in the conflict, a helpless territory that the Federal Government made desperate, if tardy, efforts to defend.

War was declared on June 18, but the Government neglected to notify its frontier posts of the declaration; thus, it was a simple matter

for a force of 520 men to cross, on July 17, from the British fort on St. Joseph's Island, in the St. Mary's River (*see Drummond Island, Tour 17*), and take Fort Michilimackinac. The fort and Mackinac Island were surrendered without a shot being fired. This seriously weakened the American position in the Michigan Territory, particularly at Detroit, where General Hull had remained unaware of the state of war until the surprise capture, on July 2, of a ship carrying invalid soldiers to Detroit. Hull surrendered Detroit on August 16, 1812, and for a time Michigan was lost to the United States.

Before the State was reclaimed, Tecumseh, who led a pro-British Indian confederacy, had to be conquered; Kentucky had to send thousands of its men to the rescue of Michigan; and the Federal Government had to authorize the building of its first fleet on Lake Erie. Lieutenant Oliver Hazard Perry, commander of the American ships, engaged the British near Gibraltar Island on September 10, 1813, and, after three hours of fighting, was able to send to General William Henry Harrison, Commander of the Army of the Northwest, the brief message: 'We have met the enemy and they are ours. Two ships, two brigs, one schooner, and a sloop.'

Perry's victory and Harrison's rout of the British in this region brought comparative peace to Detroit and Michigan. Harrison's forces reoccupied Detroit, September 29, 1813, and, in October, Harrison departed for the East, leaving Colonel (later General) Lewis Cass as military governor at Detroit, then garrisoned by 1,000 regulars. The treaty that ended the war was not signed until December 24, 1814. When the long military occupation ended, Detroit was left impoverished and its citizenry discouraged.

Fortunately for the Territory, General Lewis Cass was appointed as the new governor, an office that he held for 18 years (1813-31). Later he served as United States senator from Michigan (1845-57). He had earned the praise of General Harrison for his part in the war, and he proved an able leader in State affairs. Possessed of vision and the capacity to act, he was adjudged wise and honest. He negotiated the treaties of 1819 and 1821 with the Indians, obtaining for the United States title to more than half of the Lower Peninsula, and the treaty at Sault Ste. Marie in 1820, at which was obtained the site of Fort Brady (*see Sault Ste. Marie*), needed to secure the northern boundary line in a wilderness where the British were still influential traders. When dealing with Indians who hesitated to sign away their lands Cass was not averse to overcoming their scruples by providing them

with all the rum they could drink. At Cass's direction many tribes were given military escort to lands further west—the first use of a method that subsequently spelled misfortune to the red man.

Michigan's growth was somewhat slower than that of other sections of the Northwest Territory, partly because of erroneous reports, made by early Government surveyors, that almost the entire area was impenetrable swamp. One of Cass's first tasks was refutation of these reports. He toured the Territory by canoe and on horseback, making friends among natives and outpost men, and then reported to Washington regarding the resources of Michigan and the desirability of settling here. Printing presses established at Detroit, Ann Arbor, Monroe, and Pontiac gave his findings publicity. Only then did immigration begin.

Another handicap was lack of roads into the interior. Governor Cass tried unsuccessfully to get Congress to support road construction. Next he proposed that the War Department build highways to connect Detroit with distant posts at Mackinac and other places, inaccessibility of which had been a disadvantage in the War of 1812. Alert to this need, Congress authorized five military highways from Detroit across the State. When settlers from New England and western New York began to arrive a few years later, they found passable roads to almost every section of Michigan.

The first public land sales at Detroit in 1818, the beginning of steam navigation on the Great Lakes in the same year, and opening of the Erie Canal across the State of New York in 1825 brought a rapid increase in settlement. The Indians, as friends and as enemies, had been reduced to impotence. In 1819, when a Congressional delegate was elected from the Territory, suffrage was exercised in Michigan for the first time since the general assemblies of the Northwest Territory in 1798, 1799, and 1800. Continuous demands of the *Detroit Gazette* and pressure by the increasing American element resulted in the adoption of a legislative council of nine persons, Federally appointed out of 18 chosen by the people of the Territory. This second legislative council was more democratic than its predecessor in that property qualifications for membership were rescinded. In 1825, incumbents of county offices, with the exception of the judiciary, became subject to the will of the people, and the legislative council was increased to 13 members. Two years later, the body was elected directly, Congress and the Federally appointed governor retaining veto power over legislation. Michigan prospered under the leadership of Cass.

The fur trade, Michigan's first great commercial activity, reached

its peak about 1830. Within another ten years, agriculture and the swiftly developing timber industry were destroying the haunts of fur-bearing animals. Nevertheless, to this day the fur trade is still important. In spite of depleted forests and hordes of sportsmen, the average annual sale to licensed Michigan dealers is about 570,000 pelts, not including large sales to out-of-state dealers.

Stevens T. Mason, who became acting governor upon the death of the appointed governor in 1834, caused the territorial legislature to petition Congress for permission to form a State government. Congress refused, owing to the opposition of Ohio representatives, who wished to delay Michigan's admission to the Union until Ohio obtained undisputed possession of the Toledo strip, 470 square miles of territory along its northern boundary. Under Mason's leadership, the legislature authorized a census to prove that the population of the Michigan Territory exceeded the 60,000 required for statehood. There were, the census revealed, 82,273 inhabitants.

A convention was consequently called at Detroit, and the Michigan Constitution of 1835 was formulated. Based on the proposition that 'all political power is inherent in the people,' the instrument provided for the creation of judicial, executive, and legislative branches of government. The franchise was extended to all free, white male residents in the State. The legislature was required to vote *viva voce* and to hold open sessions. Popular education was insured by specific provisions for the maintenance of a scholastic system, complete from the first grade through the university; these provisions were alterable only by constitutional amendment. The constitution was approved by the Michigan electorate on October 5, 1835.

Ohio's resistance to Michigan's admission to the Union was augmented by that of Southern States, for the Ordinance of 1787 provided that Michigan must remain free of slavery. Finally, the Senate reached a compromise: Michigan and Arkansas were to be admitted simultaneously, the latter as a slave State, and the former on condition it recognized Ohio's claim to the Toledo strip.

Delegates to the Convention of Assent, held at Ann Arbor in September 1836, refused to accept the settlement. Federal appointments to positions in the new State had been made, however, and appointees were clamoring to take office; and still more pressure was brought to bear because of the share of the profits assigned to the States, from the impending sale of public lands and from the Treasury surplus. On their own initiative, the Democrats called a convention, which gave

assent, December 15, 1836, and Michigan was admitted as a State, January 26, 1837—literally without its consent. Opponents took no part in this 'frostbitten convention,' as they called it.

In exchange for the Toledo strip, the Upper Peninsula—given to the Wisconsin Territory when it was organized early in 1836—was returned to Michigan. Although this seemed unfair to some inhabitants of Wisconsin, the settlement stood; and it proved to be the best 'trade' in Michigan history.

At the time of Michigan's admission to the Union, there were towns throughout most of the southern section, agriculture was securely established, the astounding commerce in lumber had begun, a careful survey of the rich mineral deposits in the north had been ordered, and there had even been one or two real-estate booms. Even before 1837, leading politicians, in answer to popular demand, had practiced the doctrine of 'progress through legislation.' The Erie and Kalamazoo Railroad, chartered in Michigan in 1832, was taken over by the State five years later. In the effort to force speedy development of the country, the Clinton and Kalamazoo Canal, to connect Lake Michigan and Lake St. Clair, was begun in 1838 by the State; 25 railroads and navigation companies were chartered before 1839, though very few of these went into operation; numerous highways were laid out and placed under local supervision.

Echoing the opinion of President Andrew Jackson that bankers were 'soulless monopolists,' a campaign waged by the popular press led to the passage of laws whereby anyone could open a bank. But these laws failed to control the evils of overcapitalization, and too many notes were issued on inadequate security. Such a large amount of paper currency in a new, undeveloped country inevitably fostered wild speculation in land, and the bubble of prosperity was inflated to vast proportions. It was pricked when President Jackson's Specie Circular ruled that Government lands could be purchased only with coin. All wildcat banks that had over-issued notes began to suspend specie payments. Banks failed all over the Nation, and Michigan was one of the States hardest hit.

The policy of internal improvements was modified to bring about a more equable growth during the Democratic regime, which lasted more than a decade, following a two-year Whig administration (1839-41). Government lands were appropriated for the building of State roads, and many plank road companies were chartered. In 1846, the State

sold to private corporations the railroads it had owned. The next year, the State capital was removed from Detroit to Lansing.

When iron and copper were discovered in the Upper Peninsula, the voices of eastern capitalists joined in Michigan's clamor for a canal around the falls of St. Mary's. The Soo Ship Canal, begun by the Federal Government in 1853, was finished two years later. The locks and gates of the canal were the largest in the country at that time, and the water depth greater than that called for in any similar American work.

The financial crisis of 1837 had graphically revealed some of the flaws in the State's first constitution; other inadequacies became apparent, as Michigan's industrial and financial development became more complex; and at last the people voted to hold a constitutional convention. The new constitution, framed in 1850, formed the basis of Michigan's government for more than 50 years, although one of its chief defects—specific fixing of the salaries of State officers—gave rise to much scandal and necessitated numerous amendments.

Michigan's lessons in finance inspired provisions that State debts should never exceed \$50,000, that appropriations of money for local or private purposes should have the assent of two-thirds of the elected members of the legislature, that the State should not invest in any corporation or be a party to any work of internal improvement, and that any general banking law should be approved by a majority of the voters.

The Constitution of 1850 did not satisfy those who wanted to maintain a pure democracy. Slavery was prohibited, but the Bill of Rights had been eliminated, except for a few limitations scattered through the document. Furthermore, a clause of the new code stated that 'the doors of each house shall be open, unless the public welfare require secrecy,' while another clause permitted certain procedures to be omitted from the published journal. These enactments led three members of the constitutional convention to protest, 'The distrust in the intelligence of the people, stamped upon every article of the Constitution, is a stigma upon their character, not justified by the history of the State.' The new constitution provided for election of most of the judges not already responsible to the voters.

The Democratic party's position on slavery was one of moderation and the preservation of harmony within the Union. But antislavery sentiment—lashed by biased reports respecting the Kansas-Nebraska disorders and by the passage of the Fugitive Slave Law of 1850—be-

came so strong that it served as a basis for uniting Free Soilers, radical Whigs, and radical Democrats in the Republican party, founded at Jackson, in 1854. The new party's principles were influenced both by the New England conscience of many of Michigan's adopted sons, and by the antagonism to all things 'feudalistic' inherent among the Dutch, German, and other European immigrants, who made up a goodly proportion of the State's rural population. All these conditions swept the Republicans into power in their first campaign in the State.

It is interesting to note that a proposed constitutional amendment of 1850, to provide 'equal suffrage to colored persons,' was rejected—12,840 for; 32,026 against. Negro suffrage was not won until 1867.

The Republican legislature of 1855 attempted to institute various reforms, most important of which was a State liquor prohibition law. It also passed a law that prosecuting attorneys should defend those arrested as fugitive slaves; another law forbade the use of county jails for their imprisonment. These measures went to the limit of a State's constitutional power to obstruct enforcement of a Federal statute.

It was during this first Republican administration that the legislature passed 'an act to provide for the formation of companies for the running, booming, and rafting of logs' and 'an act to provide for the inspection of lumber,' to meet the needs of a swiftly expanding industry. Commerce and industry were further favored by subsidies to private railroads and by a bounty placed, in 1859, on the manufacture of salt. The latter measure was hastily amended in 1861, after large salt deposits were discovered in the Saginaw Valley. Agriculture continued to be the chief source of revenue of the State, but the farmers' political influence began to decrease.

In 1856, a national Republican party was formed around the Michigan nucleus. Although its majority was reduced in the State election the following year—due to the economic crisis of 1857, coupled with large governmental expenditures and high taxes—its stand on antislavery and temperance kept it in power. Until 1882, the Republican party's domination of Michigan politics went virtually unchallenged. The influence of financial interests, particularly of powerful railroad lobbies, over the legislature in this period is illustrated by the drastic law that decreed imprisonment as penalty for any obstruction of the operation of a train. In defiance of the constitutional provision that forbade the promotion of railroads by the State, the legislature of 1869 empowered lesser political divisions to grant subsidies. Typical of communities eager to avail themselves of this privilege was Lansing.

Then a city with a population of 6,500, it granted municipal aid to six different railroads. But the boom was short lived, for a year later the Michigan Supreme Court declared the act unconstitutional and nullified the debts of local governments to railroads and bondholders.

Farmers, actuated by the belief that the legislature was helping middlemen and railroads to obtain more than their share of profits, organized the Granger movement as a means of defense. The desire of the people for cheaper money in the form of 'greenbacks,' combined with their distrust of the Republicans, brought about the election in 1882 of a Fusion-ticket Governor, Josiah W. Begole. His administration, in spite of a Republican majority in the legislature, was essentially nonpartisan, and many liberal measures were enacted. The Bureau of Labor Statistics was established; work in industry of children under 14 years of age was forbidden; and school attendance of children under 14 years of age was made compulsory for at least six months of each year. In contrast to Begole's progressive program, his successor, Russell A. Alger, Republican landowner and lumberman, reverted to stodgy conservatism. His administration was marked by the first major use of the State militia in industrial disputes.

In the administration of Hazen S. Pingree (1897-1901), much legislation advantageous to the common people was passed. Farmers were aided, and an *ad valorem* tax on railroads replaced specific levies. Furthermore, the privileged position of large corporations was boldly attacked. At a special session of the legislature in March 1918, Governor Pingree declared that Michigan's railroad, express, telegraph, and telephone companies owned one-third of the property in the State, but paid only a twenty-sixth of the taxes. Public demand for reform became so great that another constitutional convention was held. The document, framed in 1907, was approved by the people the following year.

The new charter corrected some of the defects of the Constitution of 1850, but ultra-conservatives pushed through a compromise plan granting limited powers of initiative and referendum, but designed to leave control substantially in the hands of the legislature. One real improvement was the provision for *ad valorem* taxes, instead of specific taxes, on express and telephone companies.

A second reform movement resulted in the legislature's adoption of two significant constitutional amendments in 1913. By one of these, the people reserved to themselves the power to propose and enact at the polls legislative measures, resolutions, and laws; and to approve or

reject any legislative acts except those making appropriations for State institutions and to meet deficiencies in State funds. By the other amendment, it was provided that amendments to the constitution might be proposed by petition of the voters, and would become part of the constitution if approved by a majority of the electorate. During this period, amendments to enfranchise women were twice proposed and defeated.

Under the stimulus of post-war enthusiasm for reform and efficiency, the legislature in 1921 established the Community Council Commission to study governmental activities and make recommendations for sorely needed revisions. According to Harold M. Dorr, in *Administrative Organization of the State Government in Michigan*, 'There was almost no machinery for making effective the normal supervisory powers of the governor. Duplication of function, contradictory effort, inefficiency, and extravagance were the characteristic products of this system.'

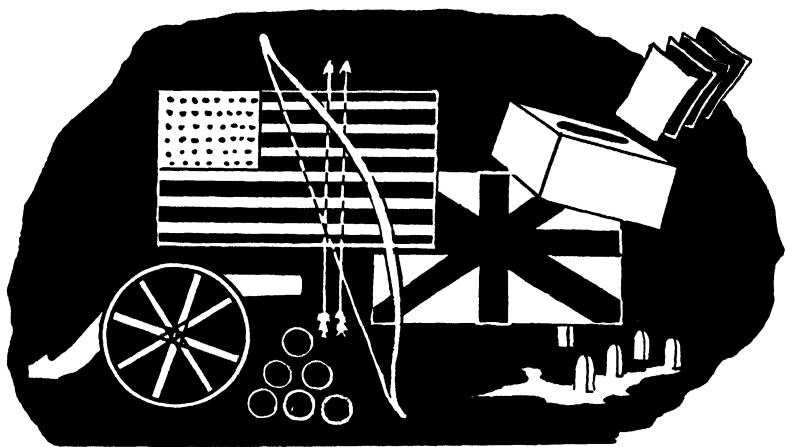
Although subsequent legislation fell short of the recommendations made by the commission, it reduced the confusion and established a powerful means of centralizing control in the State Administrative Board, composed of the governor and six other elective administrative officers. This body has supervisory control over all agencies of State government, with authority to direct finances and transfer employees for greatest efficiency. The departments of agriculture, conservation, labor, public safety, and welfare were also created at the recommendation of the commission.

State planning on a wide scale was made possible for the first time in the United States by the Michigan Land-Economic Survey, established in 1922 as a division of the Department of Conservation. Land on which the taxes were five years delinquent was deeded to the Department of Conservation, which now includes among its functions the supervision of recreational areas and the maintenance of such natural resources as forests, game, and fish.

As head of the State government, the governor has veto power over legislative bills. In the case of appropriation bills, he may veto any specific item or items without passing a veto upon the remainder of the bill; such specific vetoes may be overridden by adherence to the rules prescribed for passing other bills over executive veto. The salary of the governor of Michigan—a State that collects and expends about \$200,000,000 annually—is \$5,000 yearly, with a flat drawing-account

of an equal sum. This contrasts sharply with the salary of the mayor of Detroit, who receives \$15,000 a year.

The ancillary units of the State government consist of the city, village, county, and township. Various forms of municipal government are in effect. Grand Rapids and 43 smaller cities have the city manager system; Kalamazoo has the commission-manager form; elsewhere the aldermanic system is common. Detroit operates under a nonpartisan mayor-council government, the charter of which was adopted in 1918. The mayor, elected for a term of two years, holds the executive position, with power of veto over the legislative council. The nine council members are elected every two years; they receive an annual salary of \$5,000 each. The judicial division is composed of the various city courts.



State Development

WHEN Michigan was admitted to the Union in 1837, it was mainly an agricultural State. Wagon roads were few and poor; no railroad had been completed; to send a letter was a luxury. There were no cities, except Detroit, and few newspapers. Michigan's boundless forests were considered an evil by the farmers who were clearing the land in the southern counties.

That year the population numbered 174,467. As new means of communication were opened and the State's resources became more widely known, a stream of immigrants poured in. Forty-three years later, in 1880, the census reported 1,636,937 inhabitants, 75 per cent of them living in rural areas. Michigan was still chiefly an agricultural State, but mining and lumbering were beginning to attract outside capital, and the growth of industrialism was to proceed with ever increasing rapidity. In 1900, the State's population had risen to 2,420,982; in 1930, it reached 4,842,325. The profound change that had taken place is illustrated by the fact that, in 1930, 68.2 per cent of the inhabitants lived in urban centers, and that the Negro population, which numbered 17,115 in 1910, had increased to 169,453, or 3.5 per cent of the total. It has been increasing steadily since.

The foreign-born white population increased between 1920 and 1930 at a rate greater than that of any other State except California and Florida. This group now comprises 17.4 per cent of the total population and, as with the Negroes, is largely employed in industry. By 1930, Michigan's population density had reached 84.2, or double the average for the United States as a whole.

TRANSPORTATION

The canoe was the first means of transportation employed by the white explorers and missionaries who reached the Great Lakes region in the early days of the seventeenth century. As the number of settle-

ments grew, the canoes were replaced by French bateaux, more suitable for handling cargoes of trade goods and bundles of furs. René Robert Cavelier, Sieur de la Salle, built the *Griffon* in 1679, the first sailing vessel on the lakes, and, although it was lost with all hands, it proved that larger ships could navigate the inland seas. On the earliest maps of explorers, the Great Lakes were charted with fair accuracy, for the lakes offered the safest and easiest route into the new country.

When the soldiers of European monarchs came to fight for control of the new country's riches, a network of Indian trails covered Michigan. The first roads in the State were laid out along routes worn bare by moccasined feet. The Old Shore Trail (US 20) from the east met converging lesser routes at the site of Toledo; the Canadian Montreal Trail joined at Detroit the Chicago (US 112) and the St. Joseph (US 12) Trails westward. The principal north-south route was the Saginaw Trail (US 10 and US 27) from Detroit through Pontiac, Flint, and Saginaw. It branched near Houghton Lake, one section entering the Lake Michigan country, the other running due north to the Straits of Mackinac. The Lake Michigan branch divided, one trail leading into the Grand Traverse region and the other north through the Little Traverse country to the Straits.

When, after the War of 1812, Michigan was finally included within the boundaries of the United States, some of the Indian trails in the southern section of the State were converted into roads. The first military road, which was also the first true highway, was built in 1818. Stagecoach routes were established in the first half of the nineteenth century, linking Detroit with Chicago. Intra-state routes were slower to develop, for most of the trails became one-way roads, along which crawled long caravans of settlers on their way toward the interior.

The transportation facilities of the Great Lakes contributed greatly to the settlement of Michigan, for, in early decades, sailing ships were the only means of reaching isolated settlements on the Lakes. Perhaps the greatest single contributing factor, however, was the Erie Canal: its opening in 1825 enabled settlers to make the journey from the East entirely by water, and gave agriculture an irresistible stimulus. Settlers came in, produce went out. The volume of traffic became even greater after the coming of the railroads. Lumbering and mining towns sprang up overnight, all of them with something to send to the East. For several years after the opening of the mines, all ores had to be portaged past the rapids at Sault Ste. Marie, until in 1855 the State completed the first locks at that point. These have since been improved and many

times enlarged by the Federal Government (*see Sault Ste. Marie*). Shipping on the Lakes followed a steady pattern of development, from sailing vessels, through the first woodburning steam 'propellers,' to Diesel-driven craft—a series that included full-rigged ships, the distinctive 'whalebacks,' and the huge bulk freighters of the present ore and grain fleets. Michigan's harbors, strung along 1,600 miles of coast line, made shipments aggregating 20,283,000 tons in 1925, and received a total of 9,277,000 tons. From first to last, the large rivers and the Great Lakes have afforded excellent and cheap means of getting Michigan products to domestic and foreign markets.

The first railroad in Michigan, connecting Detroit and St. Joseph, was incorporated in 1832. By 1857, there were three lines spreading westward from Detroit across the southern part of the State. Iron ore discoveries spurred building in the Upper Peninsula, and the Iron Mountain Railroad between Ishpeming and Marquette was finished in 1857. Lumbering in the Lower Peninsula and lumbering and mining in the Upper drew the railroads into new country. Advancing northward from Detroit and eastward from Marquette, the railroads connected the two peninsulas in 1881, when railroad ferry service was established across the Straits of Mackinac. By 1910, there were 9,021 miles of track in Michigan. Many lines that once served lumbering and mining locations, however, have been abandoned, and the increased use of motor-truck transportation has caused car loadings to decline.

Road improvements were numerous in southern Michigan's swamp and wilderness in the middle of the nineteenth century. Corduroy and plank were used to combat quagmires, but toll bridges and tollgates added to the expense of traveling, and district, county, and township administrations created legal barriers, across which it was virtually impossible to construct through highways except as Federal military projects. Even Mark Twain failed to smile when he was asked, after a lecture in Grand Rapids, how he found the roads. He replied that they would have been extremely hard to find, if some scoundrel had not thrown a plank across them once in a while.

Since railroads and highways did not keep pace with southern Michigan's agricultural development, there arose a demand for faster inter-city and farm-to-market transportation. High-speed, electric interurban lines met this demand. Between 1891 and 1910, they spread across the entire southern half of the Lower Peninsula; but with the erection of the first automobile factories at Detroit, Flint, Pontiac, and Lansing,

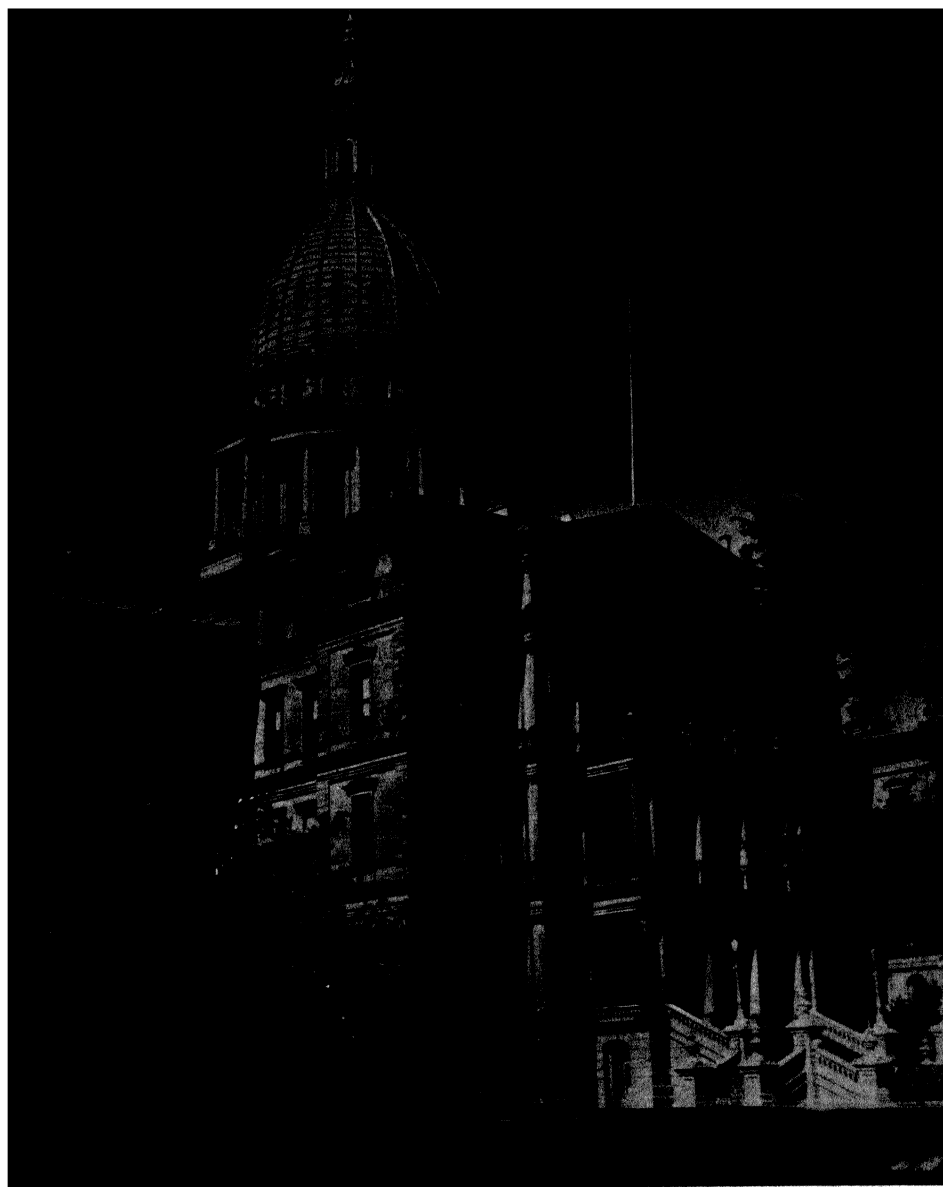
at the beginning of the present century, the importance of the inter-urban lines was threatened and finally destroyed.

Although automobile drivers were eventually responsible for improvement of the highway system, bicycle clubs were clamoring for better roads as early as 1875. The League of American Wheelmen, organized in 1879, pressed its campaign for 26 years until, in 1905, Governor Fred M. Warner signed an act creating the Michigan State Highway Department, with an appropriation of \$20,000 for the first year. Horatio S. Earle, an ardent bicyclist, was named commissioner. When the American Road Makers' Association met at Port Huron that year, Earle was accused of turning Michigan's dirt roads into speedways, by his offer of prizes for the best time records made by convention delegates. There were 2,700 automobiles in Michigan in 1905 (paying 50¢ annual license fee), and these, as well as bicycles, were considered nuisances by those who used horses. Uriah Smith of Battle Creek met this difficulty with true diplomacy—he attached a dummy horse to the front of his horseless carriage.

The handicap of local administration effectually delayed a real highway system until 1913. In that year, when 60,000 automobiles were registered in the State, a group of Roscommon men formed the Michigan Trunk Line Highway Association at Saginaw, and the legislature passed a bill providing for the establishment of ten trunk-line highways. This laid the basis of the present road system in Michigan. In 1919, an amendment to the constitution permitted the State to borrow \$50,000,000 for highway construction.

Michigan's highway department has been notably progressive. The State laid the first cement highway, built one of the early super-highways, was one of the first to adopt the principle of 'clear vision ahead' in highway design, established new standards of accuracy in laying materials, and is now building a series of scenic roads. One such scenic highway is US 31, which passes through the dunes country and skirts the lake. Another drive follows the Lake Huron shore (US 23); plans for others, one to skirt Lake Superior, have been announced. There are about 92,000 miles of rural highways in Michigan, of which nearly 9,000 miles are part of the State and Federal trunk-line system. The system includes 5,093 miles of hard-surface roads and 3,382 miles of graveled roads, as well as 486 miles of earth improved and unimproved roads.

A State in the Making



Photograph by C. J. Arksey

THE CAPITOL, LANSING



Reproduction of print by courtesy of U. S. Army Signal Corps
MICILIMACKINAC (FORT MACKINAC) AS IT APPEARED ABOUT 1850

FORT PONTCHARTRAIN (DETROIT) IN 1705

Reproduction of print by courtesy of U. S. Army Signal Corps



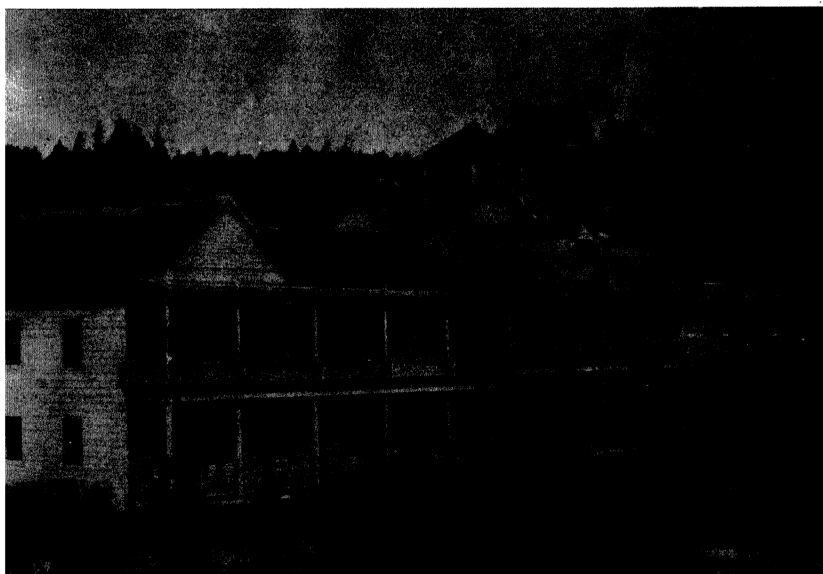


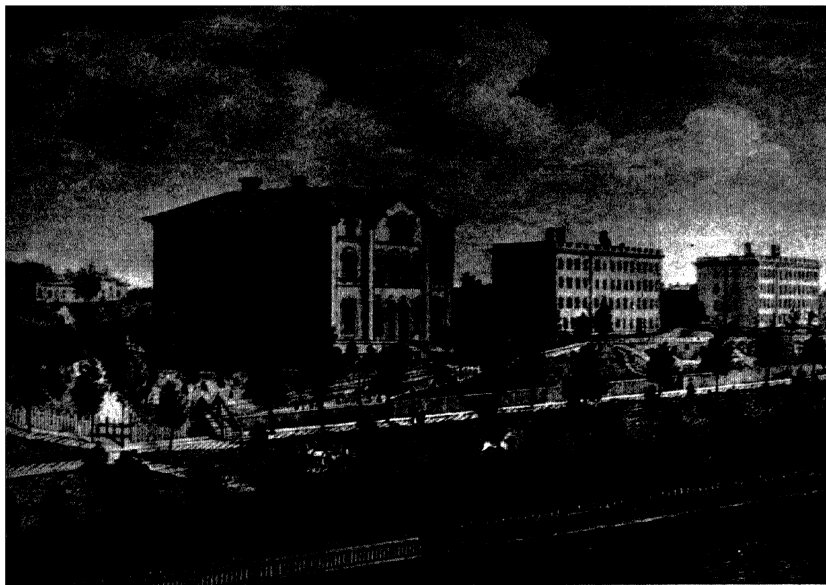
Photograph by courtesy of Michigan Department of Conservation

OLD ASTOR FUR POST, GRAND ISLAND

ASTOR HOUSE, FORT MACKINAC (from an old photograph)

Reproduction by courtesy of U. S. Army Signal Corps





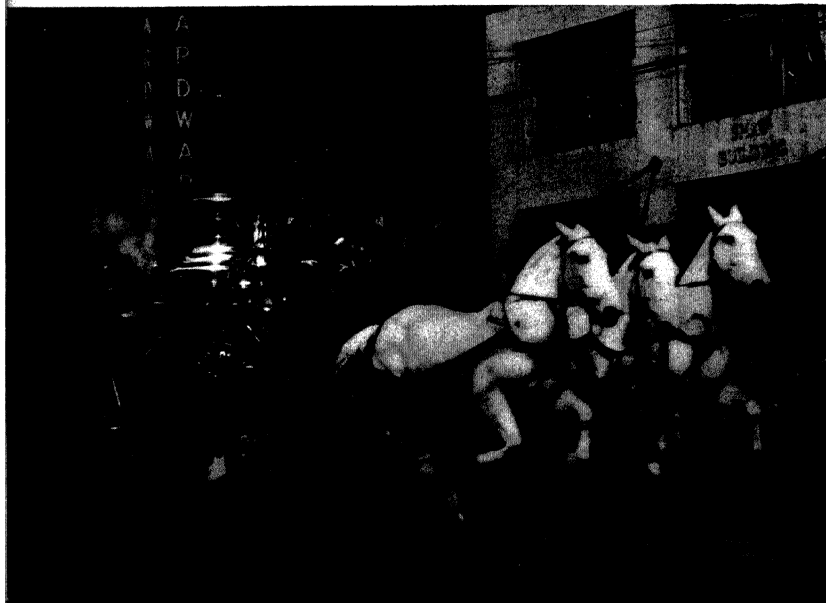
Reproduction by courtesy of the University of Michigan

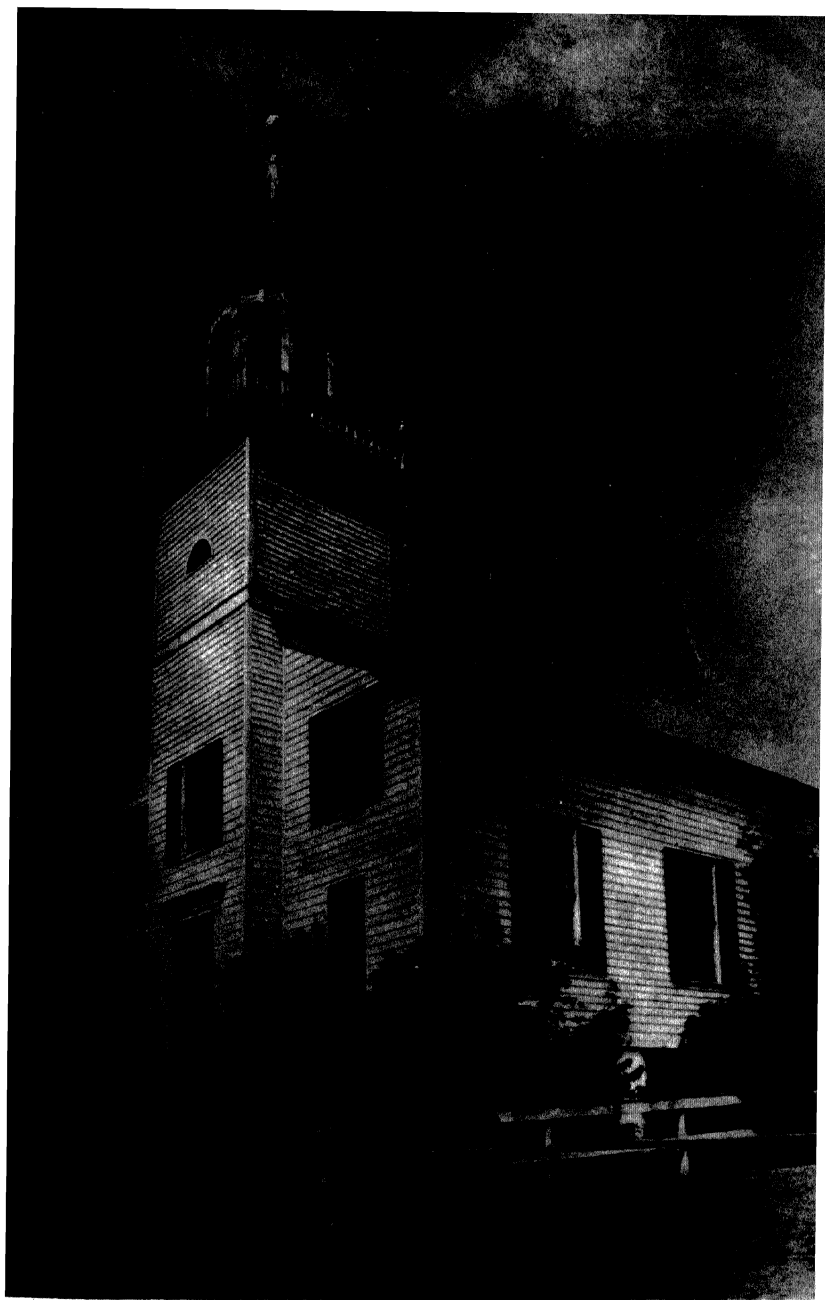
THE UNIVERSITY OF MICHIGAN IN THE SIXTIES

This engraving was made by Samuel Geil in 1863. The law building is in the foreground, and to the right are the two original University buildings.

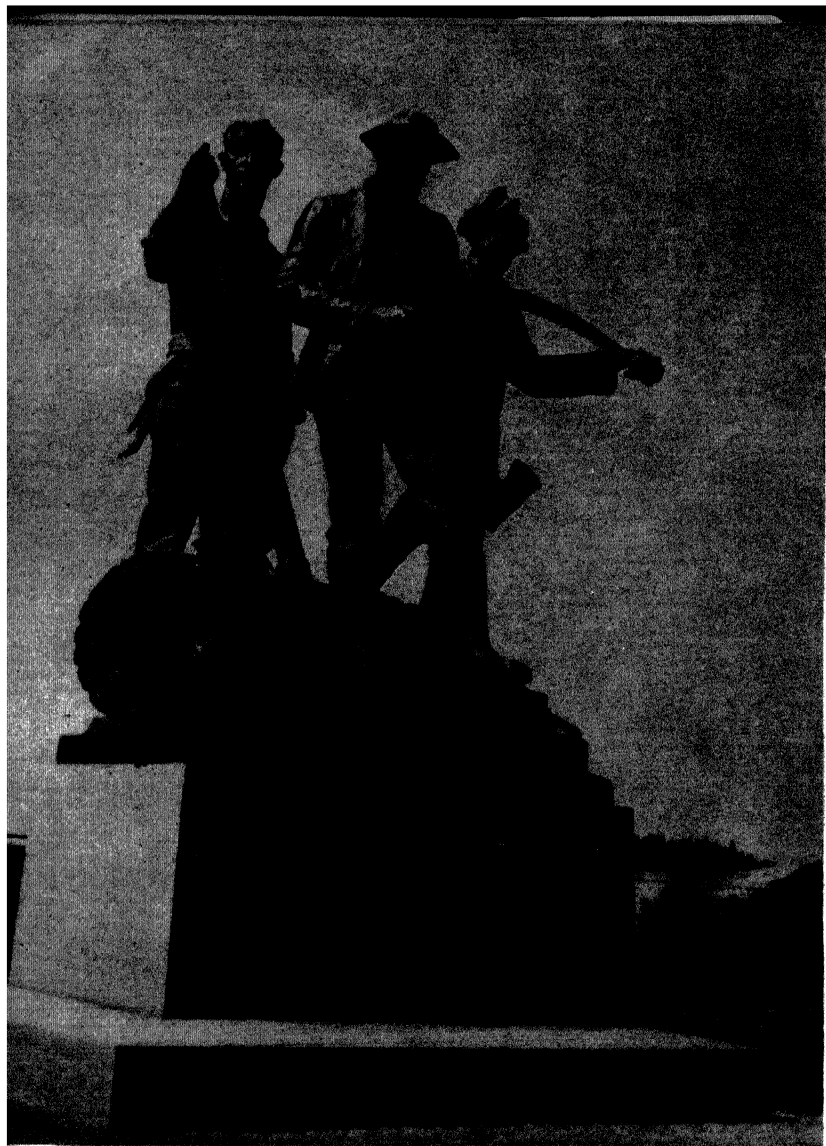
LAST RUN OF A HORSE-DRAWN FIRE ENGINE IN DETROIT, APRIL 10, 1922

Photograph by courtesy of Detroit Historical Museum





MISSION CHURCH, MACKINAC ISLAND



Photograph by courtesy of East Michigan Tourist Association

THE LUMBERMAN'S MEMORIAL, ON THE AU SABLE RIVER IN IOSCO COUNTY

This monument was erected 'to perpetuate the memory of the pioneer lumberman of Michigan through whose labors was made possible the development of the Prairie States.'

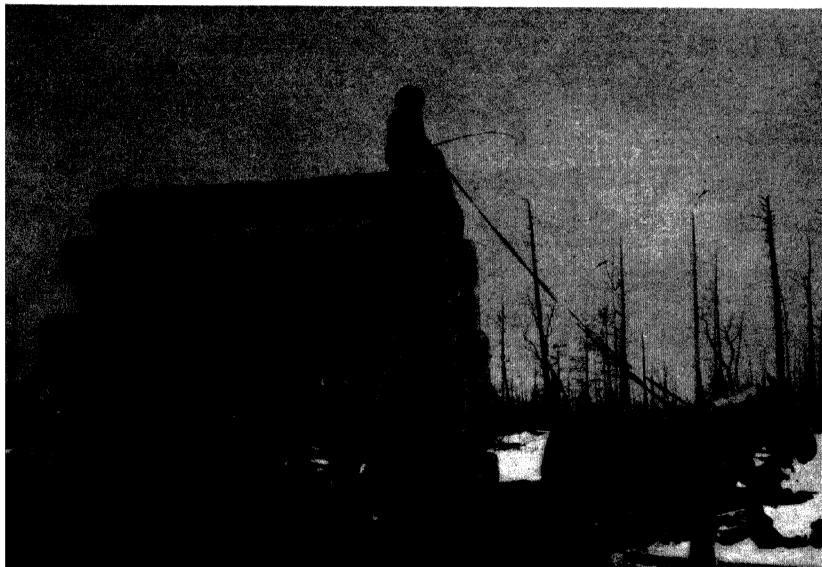


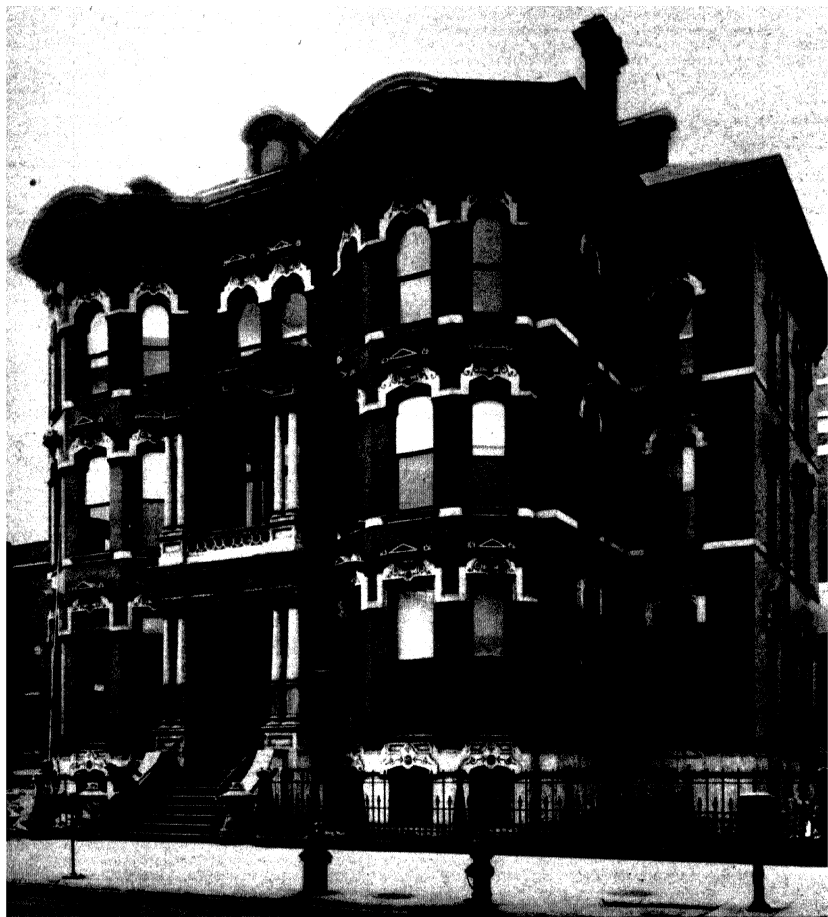
Photograph by courtesy of U. S. Forest Service

A "KATYDID"—A CONTRIVANCE USED FOR HAULING LOGS (c.1890)

LOAD OF WHITE PINE LOGS ON SLED (c.1890)

Photograph by courtesy of U. S. Forest Service





Photograph by courtesy of Detroit News

HOME OF GOVERNOR HENRY B. BALDWIN, DETROIT

This is a notable survival of an architectural style popular throughout the State in the closing decades of the last century.

AGRICULTURE

Michigan has a somewhat different story to tell of its agricultural beginnings than have other richly productive States. For at least 100 years after the founding of Detroit in 1701, the only farming was done by the French settlers who clung close to the waterways, preferably near forts and trading posts. The British did not greatly change things. The fur trade, which had lured the first settlers into the region, continued to be the chief source of revenue, until, with the opening of the Erie Canal in 1825, farming came to play a leading role in the economic life of the Territory.

Reliable figures are not available before 1841, but in that year wheat was the leading crop, and it brought more returns than all other surplus field crops combined. The average price was 70¢ a bushel, and the total value more than \$2,000,000. Indian corn was another important crop, and oats, barley, seed-clover, hay, vegetables, and potatoes proved profitable. Great quantities of maple sap were taken from the forests and converted into sugar. This period saw the beginnings, too, of fruit production. Apples, small fruits, and berries were shipped from the Lake Michigan shore, and farmers had discovered the especially fine peach lands on the western border, near the mouth of the St. Joseph River. This fruit belt, one of America's foremost, stretches northward to the Grand Traverse Bay region and as far inland as the tempering influence of Lake Michigan extends, roughly 30 miles.

By 1870, the farmers and the lumbermen had cleared a large part of the southern half of the Lower Peninsula. The output of agriculture for an average year was estimated at \$88,000,000. Leading products were corn, 23,000,000 bushels; oats, 25,000,000 bushels; hay, 1,600,000 tons; wool, 13,000,000 pounds; and celery, grown in large quantities in the vicinity of Kalamazoo. Apple orchards covered nearly 238,000 acres, peach orchards more than 11,000 acres.

In 1909, the total crop value was \$162,005,000. The preparation of cereal foods, one of the State's best-known industries, had so stimulated the raising of grains that they comprised two-fifths of this total. Orchard fruits were valued at \$9,000,000, and sugar beets, in the production of which Michigan ranked second, at \$4,000,000. Dairy products totaled almost \$27,000,000. The production of milk, butter, and cheese had increased steadily, keeping pace with the requirements of

expanding urban centers. The total investment in livestock, in 1910, was \$137,000,000.

Michigan's farm products were appraised at the high figure of \$250,600,000 in 1926. The main crops—hay, corn, potatoes, wheat, oats, and dry beans—contributed \$193,161,000 toward this total. Other important crops included sugar beets, fruits, barley, rye, chicory, and vegetables. The cherry orchards of the upper fruit belt yielded a rich harvest, as they have done continuously since they first began to bear in 1883. Michigan led the country in the production of spearmint and peppermint. These herbs have been grown for many years in the southwestern part of the State, where vineyards also have been an important factor in Michigan's rural economy.

Official figures for 1935, only nine years later, showed the falling off in farm produce noted elsewhere. Michigan's chief crops were valued at \$114,250,000. The total area given to the 44 leading grains and vegetables was 8,019,000 acres. The combined gross income from crops, livestock, and dairy products was \$185,722,000. That year, Michigan shipped about 12,500,000 pounds of butter to other States.

The shift from grain to livestock farming is reflected in the 1937 returns. The income from the sale of farm products had risen to \$246,198,000, of which governmental benefits comprised less than 3 per cent, but livestock and livestock products represented nearly 58 per cent. The total acreage devoted to the principal crops harvested was 7,654,000.

Although Michigan ranks twenty-sixth in the United States in number of acres under cultivation, only two of its field crops fall below tenth place. As a fruit and vegetable producer, the State's record is excellent; it holds first place for its cherry, peppermint, and spearmint crops, second place for strawberries, celery, onions, cantaloupes, and field beans.

LUMBER

Forests originally covered all but approximately one-eighteenth of the State's 37,000,000 acres. After dwellings, barns, and mills had been built and fenced in, during the intensive settlement period between 1820 and 1850, after roads had been corduroyed and adequate allowances made for future fuel supplies, there was still, on every farm in Michigan, a huge surplus of logs. At the time, no great demand for timber existed in the State, or was there any profitable way of transporting the logs to the lake for shipment. Burning was resorted to as

the only solution of the problem. To the men of that day, this wholesale destruction did not seem wasteful, for they believed that the vast forests were inexhaustible.

Notwithstanding the improvidence of these settlers, there remained enough hardwood in the southern counties to supply the Nation for many years, and much of the northern half of the Lower Peninsula was densely covered with pine. From the early nineteenth century until well into the twentieth, an army of lumbermen worked its way northward, leaving in its wake a wealth of forest folklore and millions of acres of cut-over land.

The rivers defined the lines of attack upon the forests. As early as 1805, sawmills were built on the banks of the St. Clair River. That same year, Detroit was leveled by fire, and the ensuing demand for lumber was so great that it gave rise to the first important commercial lumbering in the State's history.

By 1834, when the first steam sawmill was erected in the Saginaw Valley, other river lands of the Lower Peninsula had also begun to resound to the clear ring of the ax, the song of the crosscut saw, the rending crash of tall trees, and all the thousand noises of large-scale lumbering operations. The Au Sable and the Saginaw Rivers, each with its dozen tributaries, were the channels down which the logs flowed to Lake Huron. On the western side of the State, the Muskegon, the Manistee, and the Grand floated the timber to the shores of Lake Michigan.

There were 558 sawmills in Michigan in 1849. These employed 2,730 wage earners and turned out lumber products valued at about \$2,500,000. Thenceforward, development of the industry was so rapid that Saginaw alone raised its mill output from 92,000,000 board feet in 1851 to a high of more than 1,011,000,000 in 1882. Even in 1897, after the decline had set in, Saginaw was producing more than 339,000,000 board feet annually, and Muskegon turned out approximately 800,000,000 board feet annually between 1873 and 1888. These two cities led the world in lumber production for many years. In addition, thousands of mills, camps, and small communities, both in the Lower and the Upper Peninsula, turned out lumber in quantities sufficient to place Michigan's production at the time far above that of any other State.

During the closing years of the industry's prosperity, a high level of production was maintained, in part by the increasing use of the railroad to transport men and equipment to forests far removed from

the rivers, and in part by the exploitation of the forests of the Upper Peninsula, where, once again, the supply was believed to be inexhaustible. Michigan forests fell at the rate of 33,000 acres yearly during the peak 20-year period, 1870-90. A certain amount of lumbering still goes on in the north, although the great stands of the 'endless' pine and hardwood are gone.

In 1905, when the industry was falling off, there were 437 active sawmills, which turned out 1,719,687,000 board feet. By 1922, the number of mills was only 185, and their output had shrunk to 656,952,000 board feet, including a great deal of maple and beech, in the marketing of which Michigan retained first place. In 1936, 179 mills were operating. Their output of 405,068,000 board feet had an average value of \$28.09 a thousand.

The United States Forest Service reported, in 1922, that the stand-up timber in Michigan amounted to 39,000,000,000 feet, a reserve almost twice as great as that of Wisconsin. Cut-over lands incapable of producing farm crops are being rapidly returned to the State through tax delinquency. Federal and State agencies are reforesting parts of these areas, which, hereafter, will be lumbered only by selective cutting methods (*see Conservation and Recreation*). Sawmill timber standing in Michigan's national forests alone amounted to 85,000,000 board feet in 1937.

MINING AND EXTRACTING

The development of Michigan's lumber and mineral resources was speeded up by the needs of the Civil War. When peace was restored, the rapid development of the Midwest and the Nation-wide industrial expansion added to the State's prosperity. A thorough geological survey was ordered immediately after Michigan had been admitted to statehood in 1837. The geologist's report disclosed that Michigan not only had large deposits of copper and iron of exceptional quality in the Upper Peninsula, but salt, limestone, marl, coal, and gypsum in the Lower. Other deposits have since been discovered.

Copper mining in Michigan antedates the arrival of the first Europeans, but it was only after the western region of the Upper Peninsula was thrown open to American prospectors that copper was mined commercially. The beautiful, rock-rimmed haven of Copper Harbor, on Lake Superior, was the first center of mining operations. For several years thereafter, waves of excitement swept the State as discovery

after discovery was made throughout the Keweenaw Peninsula (*see Tour 20*). The copper is pure, not the ore-bed type. Because of its unsurpassed quality, it has usually sold at a slightly higher price than other coppers.

The most important mines of the early days were the Cliff location (1845), in Keweenaw County and the Minnesota mine (1847) at Rockland, in Ontonagon County. Each yielded more than \$2,000,000 annually to its stockholders, thereby helping to restore public confidence in Lake Superior mining ventures, at a time when the losses of other mining enterprises were acting as a strong deterrent to investors.

In 1845, Michigan produced 26,880 pounds of copper, obtained mostly from outcrop veins and surface deposits. From that year until the present day, 28 per cent of all the copper mined in the United States has been extracted from the deposits of this State. By the time of the discovery of the copper lode at Calumet, in 1864, Michigan's production had for 17 years exceeded that of any other State. Between 1847 and 1883, half of all the copper mined in this country came from Michigan; until 1887, the State held first place, and for one year, 1891, it again ranked first. The Calumet and Hecla mines contributed greatly to this supremacy and proved to be among the most valuable copper locations in the world. By 1893, this property had paid dividends of \$38,850,000.

Michigan ranked third among the States in 1913, producing refined copper valued at more than \$21,000,000. In 1925, the State was in fourth place, and in 1936 fifth, with a total yield since 1845 of more than 9,000,000,000 pounds. Gold and silver were also mined in small amounts, the silver being picked from the copper stampings in the mines of the Superior region.

The rich iron-ore deposits near Negaunee and Ishpeming were discovered in 1844. In 1845, the Jackson mine was located at Negaunee (*see Negaunee, Tour 18*). Iron was smelted for the first time in the primitive forges, or 'bloomeries,' of the Superior region in 1848, when a small forge was erected near the present city of Marquette, producing that year about three tons. Large-scale mining operations were delayed, however, until the opening of the ship canal and locks at Sault Ste. Marie in 1855. That year, 1,447 tons of iron ore were shipped through, and in 1856 this was increased to 11,597 tons. By 1860, the iron ore passing through the locks reached 120,000 tons. Iron and copper brought such high prices during the Civil War that

mines that previously had not been worth exploiting were able to operate at a profit.

As the industry developed, three separate iron districts were opened up—the Marquette, the Menominee, and the Gogebic. From the Marquette district, first to be exploited, the ore was soon being carried by rail to Marquette and Escanaba, and thence by a fleet of ore vessels to the furnaces in lower lake ports. Active operations in the Menominee district started about 1877. The third district was almost wholly undeveloped until 1884, when railroad advantages were secured for the entire region. The quality of these Lake Superior region ores is second to none but the famed Swedish ores.

In 1886, about 60 mines were in operation. The average output was 2,000,000 tons a year, with an approximate value of \$10,000,000. Increasing activity carried Michigan from second place in 1886 to first in 1890. In 1900, the State ranked second in the production of both copper and iron ore. Annual out-of-state shipments of iron ore, from 1916 to 1935 inclusive, have averaged about 12,000,000 tons. More than 500,000,000 tons of iron ore had been produced in northern Michigan by 1937.

In 1925, when Michigan's mineral production was valued at \$122,212,254, iron ore and copper took first and second place, followed by cement, salt, and clay products, in the order named. The value of Michigan's mineral production dropped sharply from \$151,976,000 in 1929 to \$77,149,000 in 1935, placing the State tenth. Two years later, it had climbed back to eighth place.

Bituminous coal is found beneath more than 10,000 square miles of southeastern Michigan. Mining began in 1836, but the peak period was not reached until 1905-9. The peak year was 1907, when 2,035,858 tons were mined. Except for an upturn between 1917 and 1920, when the value of coal mined exceeded that of any of the prior period, coal mining has declined. Extensive deposits remain untouched, probably because the generally poor quality and the thin spread of Michigan coal make profitable mining difficult.

The mining and quarrying of gypsum have been continuously profitable activities, and the manufacture of plaster has created many purely industrial towns such as Alabaster (*see Alabaster, Tour 11*). Gypsum, of such fine quality that it is used for the bed upon which optical glass is poured, has been quarried and crushed there since 1861. Fertilizer is a by-product of this mineral. Large deposits also outcrop near Grand Rapids and in the central northeast. Deeper deposits form an

almost complete circle underneath central Michigan. The production of gypsum in 1925 totaled 649,053 tons and had a value of \$5,447,294.

Limestone and sandstone are found in abundance in the eastern part of the Lower Peninsula, near Alpena and Petoskey, and in the Saginaw Bay region. The production of Portland cement is an important industry: 12,037,000 barrels were manufactured in 1926. A town in Huron County was named for the grindstone quarried and manufactured there into grinding wheels. Slate is also mined in small quantities. Clay products manufactured in 1925 had a value of \$7,396,071, about 42 per cent of which represented articles made of pottery.

Salt is one of the State's richest natural resources. Great areas in eastern and southeastern Michigan, and smaller areas elsewhere, are underlaid with porous rock containing brine of good quality in almost unlimited amounts. Long before the white man's advent, the Indians were aware of the occurrence of salt springs in the Lower Peninsula. It was first successfully well-drilled in Saginaw County in 1860, although a small amount had been extracted before that date. Waste fuel from the sawmills was used in the early days of salt production to open up the deposits and heat the pans in which the brine was evaporated, and for years salt extraction was little more than a by-industry of lumbering. By 1872, there were six salt companies in operation, chiefly in the Saginaw Valley.

Michigan soon gained first place in salt production, and, although it was outdistanced by New York State in 1893, it regained its rank in 1920. The 1926 output amounted to 2,260,320 short tons, valued at \$7,594,418. Salt is both pumped and mined. It is produced by evaporation of brines obtained from the Marshall formation at Midland, Bay City, and Saginaw. At Detroit, St. Clair, and Port Huron it is obtained from artificial brines formed by dissolving beds of rock salt in the Salina formation. Natural brines are employed at Ludington and Manistee, where they are pumped from the Detroit River formation, which contains beds of rock salt as well as brines. In only one locality in the State, at Detroit (*see Tour 9B*), is rock salt mined by the deep-shaft method, whereby it is extracted from beds of the Salina formation at a depth of approximately 1,150 feet.

In more than a quarter century of intensive activity, a total of 550,000,000 barrels of salt, valued at about \$242,000,000, has been produced. Nevertheless, Michigan's reserves have been but slightly tapped, and the State geologist reports that the known deposits could supply the needs of the entire world for thousands of years to come.

Salt production is linked intimately with the chemical and drug manufactories that have been developed in Michigan. The brine in Midland County has been used by the Dow Chemical Company since the company was formed, and it may be claimed that this, one of the world's largest chemical empires, was founded upon Michigan brine. The medicinal qualities of some of the brine has led, also, to the development of such health centers as Mount Clemens.

Another Michigan industry has been unfavorably affected by the salt deposits. In drilling for crude oil, huge brine reservoirs are encountered and the problem of disposing of the solution is not easy to solve.

Prospecting for oil began in 1886, many years after its presence had become reasonably certain; but the early developments in St. Clair and Saginaw Counties were not rich. Operations within the Saginaw city limits in 1925 yielded better results. However, too many wells were put down in a small area, and there was great waste of the natural gas, which, when the pressure it provides is properly utilized, keeps down the costs of production. Because this gas was allowed to escape, less than 25 per cent of the oil was recovered, and the bulk remains below surface and may never be taken out. But with the opening of another field in 1934, Saginaw County became one of the steady producers. The nine biggest pools are scattered through five counties in central Michigan, and the center of production is near the city of Mount Pleasant. The discovery well in central Michigan was sunk in 1928, and the deposits in this region have been the richest so far exploited in the State.

In 50 years, the industry has attained a position of considerable importance, although the sight of derricks and the odor that arises from the flat-lying country are still strange to the native Michigander. The State produced 15,776,237 barrels of oil in 1935, ranking eighth among the oil-producing States. A decided slump in production occurred in 1936, but new areas were being opened up, and the consensus of opinion among geologists was that 'the best reserves of oil in the State have to date been merely touched.' This has been borne out by the production figures for the years following: in 1937, production was 16,410,751 barrels and, in 1938, 17,697,000 barrels. Several new fields have been discovered since the summer of 1938; drilling is going on in 50 of Michigan's 83 counties.

Almost 400 miles of pipe lines carry 95 per cent of the oil to refineries near the fields or in neighboring cities, and only one line leads

to a processing plant outside the State. Gas, which may be found without oil but without which oil is never found, has recently been piped for marketing.

FISHING

Michigan's commercial fishing fleets do a thriving business. Their yearly catch amounts to about 30,000,000 pounds of whitefish, trout, sturgeon, bass, pickerel, herring, and perch from the Great Lakes. Since 1890, the value of this catch has seldom fallen below \$1,500,000, and today it is considered to be worth \$2,000,000 annually. Much of the fish is shipped to the markets of New York and Chicago, although recently the home market has improved.

MANUFACTURING INDUSTRIES

Because of the wealth of raw materials within its boundaries and its excellent transportation facilities, Michigan inevitably became one of the most highly industrialized States in the Union. Out of wood and coal, copper, iron, and other resources, Michigan has created more manufacturing industries than can be adequately listed here. Stoves, machinery, castings of brass, copper, and bronze, engines for marine, farm, and factory use, boats, paper and paper products, automobiles and supplies, chemicals, drugs, building materials, furniture, refrigerators, canned goods, cereals, paints and varnishes, spool silk, and clothing are among the important products of Michigan's factories.

In 1849, goods manufactured in the State were valued at a little more than \$11,000,000. By 1909, when lumbering was on the decline, but paper manufacturing at Kalamazoo and furniture making at Grand Rapids were still increasing, there were 58 industries in Michigan, for each of which products worth more than \$1,000,000 were reported. With an annual pay roll of \$118,968,000, they produced goods worth \$685,109,000. The products of Detroit's industries were valued at about \$253,000,000; Battle Creek's output of breakfast foods was worth almost \$10,000,000; and there were five other cities whose manufactured articles were estimated at \$10,000,000 or more. In 1910, Grand Rapids was already making goods, mostly furniture, valued at more than \$42,000,000.

Industries with products valued at more than \$1,000,000 numbered 112 in 1935, and there were 219 other industries of unlisted product values.

The automobile industry has played an increasingly important part in Michigan's industrial expansion ever since the early 1900's. Today, grown to gigantic size, it overshadows the State's other manufacturing activities.

The coachwork of the first automobiles was patterned upon that of horse-drawn carriages, and the nascent industry, as a matter of convenience and necessity, gravitated toward such cities as Flint, Pontiac, Lansing, and Detroit, where, long before the first motorcar came into existence, vehicles had been produced. There it found abundant supplies of hardwoods, exceptional transportation facilities, and expert craftsmen capable of adapting old forms to new needs. These cities are still the main centers of production, although the manufacture of automobiles and accessories has spread to several other communities.

In 1904, Michigan's automobile production was valued at slightly less than \$8,000,000. In 1926 the figure had soared to \$1,820,296,128, while bodies and parts accounted for an additional \$921,901,337. Nine years later, in 1935, as the industry began to recover from the effects of the depression, automobile production in the State was valued at \$1,244,481,744; bodies and parts at \$1,018,596,515. Wage earners employed in the industry in 1914 numbered 67,538, or 24.9 per cent of the State's industrial workers; by 1925, the number had grown to 234,492, or 45.5 per cent of the total.

Foundries and machine shops ranked next to automobiles in Michigan industry in 1925, producing goods valued at about \$162,500,000. These were followed by furniture, worth just under \$100,000,000. That year, production values in round figures of other important commodities were as follows: engines and water wheels, \$96,000,000; paper and wood pulp, \$91,000,000; brass, bronze, and copper products, \$65,500,000; lumber and wood products, \$59,500,000; slaughtering and meat packing, \$54,000,000; prepared foods, \$53,000,000; and butter, cheese, and condensed milk, \$49,300,000. Michigan led all the States in the manufacture of drugs and chemicals. In 1936, Michigan's shipbuilding industry held seventh place among the States.

In 1926, there were in Michigan 5,592 industrial and manufacturing establishments employing 535,864 workers, whose wages were \$697,323,000. Of these establishments, 2,517 were in the Detroit industrial area, with pay rolls of \$466,685,039 for 331,505 wage earners. Production was valued at \$4,020,909,000 for the whole State, \$2,675,195,000, for Detroit.

The latest authentic data, in *The Census of Manufacturers*, pub-

lished by the Bureau of the Census, for 1937, disclosed that Michigan had taken the lead among the States in the per-capita creation of new wealth. Michigan factories spent \$3,204,437,649 for raw materials, and turned out \$5,296,100,960 worth of products, creating a 'new wealth' of \$2,091,633,311. Wages paid per capita amounted to \$204—or \$62 more than in the second ranking State—and for factory workers alone totaled \$986,840,523.

The assessed value of taxable property in Michigan increased from \$968,189,087 in 1899 to \$1,418,251,858 in 1902. The years 1928, 1929, and 1930 marked the all-time high in the State's history; in 1928 the assessed value was \$8,201,420,920. On this amount, the State levied \$20,500,000 in taxes. The remainder of the general revenues was secured, for the most part, from various specific or indirect taxes, such as inheritance taxes and taxes on corporation franchises. The principal source of the State's road funds was motor-vehicle fees, which in 1928 amounted to \$18,616,326. In 1937, the assessed value of all taxable property was \$5,762,721,000, on which were paid taxes of \$130,292,767.52; and, in that year, the total revenue of the State amounted to \$202,170,941.15.

Michigan's rivers are contributing once again to the State's development. From them, hydroelectric power far beyond the known needs of the entire State can easily be obtained. In 1934, 40 of these rivers supported 217 water-power plants, with an installed kilowatt capacity of 383,000, making available an average annual output of 1,862,000,000 kilowatt hours. The undeveloped power of these same 40 rivers is considered capable of supporting an additional 118 plants, which would have an installed kilowatt capacity of 300,000 and would make available an average annual output of 1,448,000,000 kilowatt hours. Moreover, there is good authority for the belief that at least 500,000,000 kilowatt hours could be obtained from other streams. Available information shows that about one-half of Michigan's water power is undeveloped, and that the potential power is divided almost equally between the Upper and Lower Peninsula. Between 80 and 85 per cent of the present power supply is consumed in the southern half of the Lower Peninsula, whereas the bulk of the undeveloped hydroelectric power is in the northern part of the Lower Peninsula and in the Upper Peninsula. Electric service is obtainable in almost all communities throughout the State, and, in 1934, was available on about 25 per cent of the farms. Under the stimulus of the Rural Electrification Administration, the farm availability has been increased since 1934 by more

than 100 per cent. More than 80 per cent of the homes in Michigan use electricity.

Another enterprise of growing economic importance is the 'tourist industry.' Until recent years hunting, fishing, and a small number of resorts were the attractions for vacationists. Today, however, the far-sighted programs of the Department of Conservation and the State Highway Department have opened up wide areas formerly inaccessible to visitors (*see Conservation and Recreation*).

LABOR

In 1837 nine strikes occurred in the United States. Four of these took place in the West, which had not at once felt the full effect of the financial panic that had prostrated the East with the suddenness of a natural catastrophe. One of the four western strikes occurred in Detroit, and the *Detroit Daily Advertiser* took note of the fact in its issue of April 4:

Yesterday our streets were paraded by a large company of respectable looking journeymen carpenters, carrying standards bearing this pithy couplet:

'Ten hours a day
And two dollars for pay.'

In the fall of 1836, Detroit business had been double that for the preceding one, and Detroit real estate had doubled in price. Stage-coach lines were carrying mail and passengers daily between Detroit and Sandusky, Fort Gratiot, Flint, and Chicago, and three times weekly a stage ran to Saint Joseph. The strap-railed Detroit and Saint Joseph Railroad was building toward Jackson. Detroit had 9 factories and 2 breweries, and a factory in Mount Clemens employed 30 men. In 1837, during the 7 months when navigation on the upper lakes was open, 200,000 persons had arrived by ship in Detroit.

For a score of years, the city's prosperity had been on the rise. New settlers came in a constant stream, and real estate and the building trades boomed. The demand for carpenters exceeded the supply. Wages were relatively high. In 1819, wages in Philadelphia had been as low as 12¢ a day, but unskilled workers in Detroit were getting \$1 and skilled workers as much as \$2.25. Accustomed to craft organization in the East, the skilled trades had organized quickly to maintain the advantages they enjoyed under boom conditions in Michigan. The walkout of Detroit's 'respectable looking journeymen carpenters' is important in the labor history of the State, because it was the first

organized protest against lower wages and increased hours, which most employers regarded as being necessary whenever their market became depressed.

The first labor organization in Michigan was the Detroit Mechanics' Society, formed in 1818 and incorporated in 1820. Its character—perhaps it functioned more as a labor forum than anything else—is indicated in a speech by its president, John P. Sheldon, at an annual meeting on August 16, 1825:

Here, within the walls of our institution, the Carpenter, the Mason, the Tailor, the Shoemaker, the Tanner, the Printer, indeed all who are practical Mechanics, whether they be Masters or Journeymen, take their seats in allowed freedom of discussion . . . Here any misunderstanding between Journeymen and Employers relative to wages can be settled.

Such organizations were typical of the United States in the early nineteenth century; owing largely to their efforts, the movement for public schools took form and resulted in the establishment of systems of free public education in several States. But they were ineffective when a crisis arose in labor relations and employers set out to increase hours and lower wages. Apparently workingmen's societies were popular in Michigan, for Ypsilanti, with a population of 240, had one in 1830. Most of them disintegrated under pressure of the panic of 1837 and the depression that ensued. After them arose mutual-help organizations. Colonies based on the mutual-help principle were established at several places in the 1840's, notably at Ann Arbor and at a settlement called Alphadelphia Phalanx. Social and benevolent in character, and typical of workmen's organizations of the first half of the century, were the Mechanics' Mutual Protection, a national secret order, which had three branches in Michigan in 1847, and the Detroit Workingmen's Aid Society, organized in 1851.

Only one labor union, properly so called, survived the depression of 1837 and the years following. This was the carpenters'. Only one union—the printers', oldest Michigan union to have a continuous existence from that time—was formed between 1835 and 1855. Though 1849 is officially named as the year when the printers organized, the existence of their union at least ten years earlier is fairly well established by copies, dated in 1839, of the *Rat Gazette*, the State's first labor paper, which vigorously opposed the employment of nonunion printers. The printers' union affiliated with the International Typographical Union in 1852.

The stonecutters organized in 1855, the iron molders in 1860, and

the machinists and blacksmiths in 1861. The latter two unions, with the printers' and carpenters', maintained their organization through the Civil War and post-war periods and survived to become part of the new labor movement that grew and became permanent after that time. Stimulated by war contracts and by demands that developed out of wartime conditions, industry and trade expanded, and the improvement in conditions had become general before the end of 1862.

By comparison with developments in neighboring States, Michigan unionism continued to lag for more than 70 years. One positive factor in this lag was the counterorganization of Michigan employers, which began with the emergence of modern unionism. The Employers' General Association of Michigan was formed in 1864. The preamble to the constitution of this body declared:

Labor has lately come to assume a dangerous attitude . . . As a natural result of this system of general interference, our business is thrown into a condition of much uncertainty . . . If continued for any considerable time, it must result in wide-spread beggary, with all its attending evils—suffering, bread-riots, pillage and taxation.

Hardly had the employers formed their association when the iron miners of Marquette organized and struck for an 11-hour day and a daily wage of \$5.50. In 1865, the printers employed by the *Detroit Free Press* struck unsuccessfully. Early in 1866, the engine crews of the Michigan Southern Railroad struck against pay by the trip instead of by the day. They, too, were defeated. Alleged use of the blacklist against the strikers resulted in a special convention of the Brotherhood of Locomotive Engineers, which had been organized at Detroit three years before. The resolution adopted on the subject by the convention is eloquent of the relatively passive attitude of skilled labor at the time. It said in part:

We do not wish to be understood as claiming the right to dictate who shall be employed by any company. If the Michigan Southern Railroad Company thinks it to its advantage to employ such men [nonunion workers] to run the engines, they have the right to employ them.

Nevertheless, craft organization had been progressing. The nine unions included in the Detroit Trades Assembly in 1864 had been joined by six others by the year following. Groups represented were the printers, iron molders, cigarmakers, shoemakers, ship carpenters and calkers, carpenters and joiners, coopers, tailors, tinsmiths, clerks, machinists and blacksmiths, painters and decorators, harness and collar makers, plasterers, and laborers. On July 4, 1865, the unions displayed

their strength in a parade—the State's only labor parade prior to 1886.

By 1867, the Trades Assembly unions embraced a membership of nearly 5,000 and had sufficient influence to place several union members on major-party political tickets. They elected a member of the machinists' and blacksmiths' union to the Detroit Common Council and secured the adoption of an eight-hour ordinance for municipal workers.

The movement for a universal eight-hour working day, originating in Massachusetts in 1865, found wide support in Michigan. By 1866, there were 25 eight-hour-league units in the State, all affiliated with the Grand Eight Hour League of Michigan and with the National Eight Hour League, which had been organized in Detroit.

Foremost in the movement was Richard F. Trevellick of Detroit. First president of the Detroit Trades Assembly, he was later elected president of the International Union of Ship Carpenters and Caulkers and was three times president of the National Labor Union. The last-named body represented an early effort to organize labor on a Nation-wide basis, in which Michigan's trade unions, Eight Hour League, and Land and Labor League branches played an active part. As a representative of the National Labor Union, Trevellick went to Washington to work for the passage of an eight-hour law for Government employees, and his success, in 1868, helped console Michigan labor for the defeat of a similar law in the State legislature the preceding year.

In its essential effects, the panic of 1873 resembled those of the depressions preceding. The Eight Hour League and Land and Labor League branches disintegrated, the eight-hour movement subsided for a dozen years, and the trade unions barely survived. By late spring in 1874, unemployment was acute enough to provoke 200 Polish laborers to parade militantly through the streets of Detroit, forcing men they found working, said the *Detroit Free Press*, 'to knock off, saying that if they couldn't work no one else should.'

Self-help as a principle of organized activity came again to the fore. The secret Order of Patrons of Husbandry (the Grange) was formed by farmers seeking to halt the domination of the railroads and commercial interests; parallel in its development was the Sovereigns of Industry, a secret organization for men and women of 'the industrial working classes,' which at one time had five councils in Michigan, and which, like the later Knights of Labor, established co-operative enterprises to ease the impact of the depression. A strike of Grand Trunk engineers in 1876 and another of Michigan Central switchmen in

1877 represented almost the only militant labor action of the worst depression years.

The secret character of labor organization in the seventies seems obviously self-protective. The organized employers in Michigan, as elsewhere, had made use of discharge and the blacklist against organized resistance to wage cuts and other methods of reducing costs. Labor, therefore, its 'peace-time' organization failing to stand against the disrupting forces of the crisis, was compelled to remain undercover even though its object in organizing was at best no more than ameliorative.

Secret in character but imbued with a new idea was the Knights of Labor, which was formed in 1869 and became active in Michigan ten years later. Its early progress is described in a manuscript written by the State organizer, Joseph Labadie, and now included in the Labadie Collection of labor and economic literature in the University of Michigan Library.

I organized several assemblies in Detroit, and in a comparatively short time we spread out over the State and honeycombed it with assemblies composed of mechanics, farmers, laborers, small storekeepers, and all classes except lawyers, who were barred from membership.

Probably the Knights' membership in Michigan was never more than 10,000, though newspaper reports credited it with 25,000 members in 1886. Its new idea was that of mass or industrial organization. It declared that the craft union—a union restricted to a single class of skilled workers—was ineffective and exclusive; that it inclined toward profiting without regard for, or even at the expense of, the workers outside its defined craft limits; and it proclaimed itself a universal organization of all workers, skilled or unskilled, on the principle that 'an injury to one is the concern of all.' The Knights proved most effective in politics. Three members were elected to the State legislature in 1882, eighteen in 1884, and thirty-eight in 1886. Largely through their efforts, such important legislation as the establishment of a Bureau of Labor (1883), a compulsory school attendance law (1883) and a ten-hour-day law (1885) was passed. In 1887, they pushed through a moderate child-labor bill, a provision requiring certain safety devices in industrial establishments, and laws requiring mine inspection and abolition of child labor in the mines.

The year 1887 was the highwater mark of the Knights of Labor. They had established by that date the first permanent unions outside of Detroit in Grand Rapids, Muskegon, Jackson, Bay City, Flint, Port

Huron, Battle Creek, Kalamazoo and other cities, and had also penetrated into many small communities, such as Lakeside, Jeddo, and Fargo.

But 1887 also saw the beginning of their decline. Up to that date they had been generally successful in their strikes. True, there was a provision in the Knights' constitution against strikes; nevertheless, hundreds had occurred, and the greatest one, the strike of the Saginaw Valley lumbermen, under the slogan 'Ten Hours or No Sawdust,' had been a spectacular victory for labor. This strike began in July 1885, preceded by a series of lumber strikes at Muskegon (1882), Oscoda (1883 and 1884), and Escanaba (1885), and in other parts of the State.

The Saginaw Valley lumbermen, who numbered more than 5,500, one-tenth of whom were child laborers, demanded a ten-hour day with no reduction in pay. The first strikers chartered a steamboat and a barge and steamed upriver from Saginaw. Stopping at every mill town, they paraded behind a brass band and an American flag, resuming their journey only after every lumber worker had stopped work and the mill fires had been banked. Thus all of the 78 mills and 58 salt blocks in the valley were shut down.

Twenty companies of State militia and 250 Chicago Pinkertons were dispatched to the scene, and the strike leader, Representative Thomas Barry of Saginaw, was arrested repeatedly until his bail aggregated \$25,000. But, at the end of three months, the strikers won their demands.

In 1887, the tide of battle flowed the other way, and the Knights met with an almost unbroken string of defeats in strikes. When a strike was lost, it was the Knights' policy to establish a producers' co-operative in the affected industry, to perform services in competition with private contractors. Thus, they had promoted co-operatives of painters, coopers, shoemakers, and other trades in several parts of the State. But all of this was of no avail in stopping the decline of the Michigan Knights of Labor, who were split by dissension. So rapid was the decline that 1892 marks the last active Detroit assembly of the Knights.

As the Knights of Labor went down, the American Federation of Labor with its craft trade unionism rose. The A. F. of L. acquired all of the surviving city central bodies, including the Detroit Council of Trades and Labor Unions that had been created in the heyday of the Knights of Labor. In February 1889, 27 locals and central bodies were

represented at the organizing convention of the Michigan Federation of Labor, whose first president was none other than Joseph Labadie, who had been so prominent in the Knights. Within 10 years the number of local unions in the State had jumped to 111 and the trade-union membership stood at 10,308. The high point was reached in 1903, when there were 589 locals with a roll of 43,069—about 25 per cent of Michigan's wage earners. After that, there was a decrease in numbers both of locals and members.

Among the largest of the strikes that accompanied the growth of the A. F. of L. in the State were the strikes of 5,000 Marquette Range iron miners in 1895, and of 10,000 Grand Rapids furniture workers in 1911, and the strike and lockout of 1,100 Kalamazoo corset makers in 1911-12.

Punctuating the rise of craft trade unionism, from 1890 to the first World War, were three major attempts by industrial unionists to gain a foothold in Michigan. The first was made by the American Railway Union in 1894, when railroad workers in Battle Creek, Port Huron, and Detroit went out in sympathy with the national Pullman strike. They were checked by hastily formulated legislation that forbade interference with railroad operation by walkouts. The second attempt was made by the Industrial Workers of the World, whose organizers reached Detroit in October 1905. In 1908, this organization split, and one faction established its national headquarters at Detroit, but neither this faction nor the 'regular' I.W.W. was generally successful in organizing Michigan workers.

The third attempt culminated in the spectacular strike of the Upper Peninsula copper miners, called July 23, 1913. This strike was led in person by Charles W. Moyer, president of the Western Federation of Miners, which had organized the copper miners between 1904 and 1910, when it was affiliated with the I.W.W. In 1911, it had transferred its allegiance to the A. F. of L.

The strikers demanded an eight-hour day, a minimum daily wage of \$3.50, and a return to the two-man drill, lately replaced by a one-man drill, dubbed by the miners a 'widow maker.' At the outset, 13,514 workers in the counties of Keweenaw, Houghton, and Ontonagon were involved in the strike.

Violence flared from the first week, when the 'Citizens' Alliance' was formed to oppose the union and 'help preserve order.' Governor Woodbridge M. Ferris ordered the entire State militia to the scene. When the strike was not quite two months old, Circuit Judge O'Brien, in

Houghton County, enjoined the strikers from picketing, molesting workers, or parading in the vicinity of the mines. Nine days later, he dissolved this injunction, holding that no sufficient reason existed for its continuance. The mine owners appealed, and the State Supreme Court ordered Judge O'Brien to renew the injunction and, later, ruled it to be valid. But violence and bloodshed continued, and two men, one of whom was Moyer, were killed in the long series of clashes between strikers and members of the Citizens' Alliance.

Efforts to mediate the strike were made both by Governor Ferris and Secretary of Labor Wilson, at Washington. On February 14, 1914, a congressional committee came to Michigan to investigate, and a voluminous report resulted. Soon thereafter, the miners began returning to work under a minimum wage of \$3, an eight-hour day, and a slight modification of the one-man drill, but without recognition of their union. Both sides claimed victory, but the union, as it then existed, did not survive for long.

Up to the first World War, the industrial and labor history of Michigan centers around the exploitation of two great natural resources, timber and metallic minerals. In recent years, an entirely new center has been formed around the mass production of automobiles. The lumber industry has grown relatively unimportant, leaving behind it the problem of cut-over timber land and stranded mill hands; and, while World War prices kept Michigan mining profitable for a time, the State's mines have suffered from the competition of the open-pit operations of the Mesabi Range and the copper mines of the Far West and South America, and output has fallen to a relatively minor position. Today automotive manufacture dominates Michigan industry; three out of every four automobiles of the country are made in the State. Following this change has come a like shift in labor organization. A flourishing activity had accompanied craft production and craft organization, but craft unionism experienced unforeseen difficulties as mass production developed at a tremendous pace.

The use of automatic and semiautomatic machinery steadily reduced the proportion of skilled labor required in motorcar manufacture. In 1920, for example, 41 per cent of the automotive workers were unskilled, and 58 per cent were semiskilled, which left only 1 per cent that could be classed as skilled. The skilled laborers were advantageously situated for bargaining power but were unable to maintain permanent unions, surrounded as they were by large numbers of unskilled and semiskilled workers. A former A. F. of L. union, the United Auto-

mobile, Aircraft and Vehicle Workers' Union, in its final membership report in 1920 claimed 45,400 members—about 12 per cent of the industry—but this independent union lost practically all of its members in a series of disastrous strikes during 1921, a year of financial depression.

Machines kept making inroads even on jobs once considered a monopoly of the skilled mechanic. Diemaking, for example, which had been dependent on sheer calculation and precision of highly paid mechanics, turned into a mechanical process by the introduction of a 'contour' machine, with a cutting tool that was automatically guided to reproduce wood models in metal.

The A. F. of L. made attempts in 1926 and 1927 to organize automotive workers, but the 1927 shutdown of the Ford Motor Company, during the change-over from Model T to Model A, threw on the labor market a surplus of 100,000 men and thereby helped to frustrate the drive to unionize. In 1933, the A. F. of L. again chartered Federal labor unions among automobile workers, and, in little more than a year, 106 of these Federal locals had been established, with approximately 60,000 members. Probably about the same number organized themselves in the several independent unions that sprang up simultaneously. In 1935, the A. F. of L. granted its Federal locals a limited international charter that excluded all workers over whom existing craft unions might claim jurisdiction. This reduced their membership to 35,000, as reported in 1936.

Meanwhile, a new trend toward industrial unionism was manifesting itself; its leader, John L. Lewis, had taken an active part in Michigan's copper strike of 1913-14. He now began to loom large in the Nation's eye as the chairman of the Committee for Industrial Organization, which was established by eight large unions of the A. F. of L. in November 1935. In July 1936, the International Union, United Automobile Workers of America, whose president, Homer Martin, claimed a membership of 30,000 workers, affiliated with the CIO. A little over a year later, its membership had increased to more than 400,000.

The first stay-in strike in autos, staged at the Bendix plant at South Bend, Indiana, was a labor victory. On November 18, 1936, in Atlanta, Georgia, there was a General Motors strike, followed by another at Kansas City, Missouri, in the middle of December. On December 24, 1936, Homer Martin wrote to ask Alfred P. Sloan, then president of the General Motors Corporation, and William S. Knudsen, then executive vice-president, for a conference to discuss a list of grievances

growing out of management policies. The reply was a proposal that grievances be taken up with individual plant managers, which was unsatisfactory to labor because, they contended, the plant managers had no power to make settlement. In Cleveland, the key Fisher Body plant was struck. In Flint, it was rumored that the General Motors Corporation would move dies out of the Fisher Body No. 1 Plant to Grand Rapids and Pontiac; and this touched off a strike on a Nation-wide scale against General Motors. The strike began at 6:30 A.M., December 30, when the workers in Fisher Body No. 2 sat down as soon as they came on duty. The No. 1 Plant was struck at 10 P.M. the same day (*see Flint*). Before it was concluded, the strike affected 150,000 workers and closed more than 60 plants in 14 States. The outcome was the signing of a collective bargaining agreement between the UAWA and General Motors; and, on February 11, 1937, the men marched out of the plants.

A wave of sit-down strikes, many of them in Detroit, stronghold of the open shop, ensued. Workers took possession of six Chrysler plants and stayed in. A huge workers' demonstration—estimated attendance, 150,000—took place on Cadillac Square. Governor Murphy brought John L. Lewis and Walter P. Chrysler together, and a truce was declared, whereby the workers evacuated the factories and Chrysler agreed to move no machinery and to sell no new cars while negotiations were in progress. Despite this truce, a series of unauthorized sit-down strikes in Pontiac, Cleveland, Flint, and other cities took place, hampering the negotiations. Finally, however, settlement was reached, and Chrysler, Reo, and Hudson signed agreements with the UAWA.

The slogan of the auto workers was 'G. M.—Chrysler—Ford Next.' The young president of the UAWA, Homer Martin, a former Baptist minister, now turned his attention to the River Rouge Plant of the Ford Motor Company. Although Henry Ford continued his firm policy of nonrecognition of unions, the United Auto Workers had been sending an airplane over the River Rouge Plant, flying the one word message 'Organize.'

On May 26, 1937, occurred the 'Battle of the Overpass,' which involved Ford in a struggle with the National Labor Relations Board. On that day, union men, including such leaders as Walter R. Reuther and Richard T. Frankensteen, attempted to distribute literature in the vicinity of the River Rouge Plant and were set upon allegedly by Ford service men (as the company's private police are called) and severely beaten. The National Labor Relations Board was called in,

and long court action followed, but the business recession of 1938, among other factors, slowed down the drive to organize the Ford Motor Company, and today, as far as Michigan knows, the workers of the corporation are still without a union of consequence.

While the CIO scored its first major success in Michigan, the Little Steel strike, which the CIO lost, spread over into the State, notably to Monroe, which had a Republic Steel plant employing 1,350 people. Here, a 'back-to-work' movement along the lines of the Mohawk Valley Formula, adopted by many employers' associations, was fostered, and a melee took place that received front-page headlines in the Nation's newspapers. Another strike—the lumber workers at Munising—was also marked by open conflict between vigilantes and strikers.

By the time the epidemic of sit-down strikes in hotels, cigar factories, department stores, restaurants, packing houses, five-and-ten-cent stores, and W.P.A. projects finally subsided, the open-shop front in Michigan had been broken. More than half of the State's wage earners were unionized. Labor Day of 1937 was celebrated by a union parade, for the first time since 1916.

In the 1937 fall elections, Detroit labor ran candidates for the city council. They made a showing in the primaries, but were beaten in the elections. In 1939, the UAWA split into rival unions, the smaller one, headed by Homer Martin, affiliating with the A. F. of L., and the other, led by R. J. Thomas, remaining with the CIO.

During 1939, two important labor disputes arose to test the new Michigan Labor Mediation Board, created by the legislature early in the year.

The first was a strike of garment workers employed in an Alpena factory, with branches in neighboring, smaller towns and cities. A compromise settlement was reached, following weeks of negotiations, punctuated by some disturbance in the vicinity of the plants involved.

The second was the difference between the United Automobile Workers and the Chrysler Corporation, which resulted in a 54-day interruption of production of new models. Employers called it a strike; organized workers called it a lockout.

Labor's contract with the corporation expired on September 30. Seventy workers were discharged, on October 6, from one of the Dodge plants, the employers contending that they had inaugurated a deliberate slow-down. The union countered with charges that operations had been speeded up to production requirements the men could not meet, and that several workers had been injured while attempting to main-

tain the required pace. Labor leaders denied that they would tolerate either slow-downs or speed-ups.

Whatever the merits of these conflicting declarations, Chrysler was manufacturing no cars. For several days, employees reported for work in various shops of the corporation, worked for brief intervals, and were sent home for lack of parts; the unions declared that a lockout existed. Nor was there in existence a contract between employers and workers, to form a basis of negotiation.

The union had drawn up a proposed new contract. It asked that production standards be set by conference, that a 10¢-an-hour blanket wage increase be granted, that all Chrysler employees join the UAWA within 30 days after being hired, that a hearing be granted workers before discharge, that a seniority provision protect employees who might be called for army service, and that grievance machinery be exhausted before either strike or lockout was ordered. The corporation gave no indication of agreeing to these terms.

Back-to-work movements were launched with no results, not even in anticipated disturbances near factory gates. In one instance, nearly 200 workers passed without trouble through a line of pickets estimated at 6,000, but operations were not resumed.

Following these attempts to resume production without a contract, a compromise agreement was finally reached and work resumed on November 30. A 3¢ hourly wage increase was granted, a mediation board of union and company officials was set up, which would recognize discharges and speed-ups as grievances, and the no-strike clause of the old contract was altered to recognize the right to strike or lock out after five days of negotiation.

So the year ended without the return of the open-shop principle to any large Michigan employment center, but with the workers' organizations, at least in public opinion, somewhat less powerful than they had been two years earlier. On April 17, 1940, however, an event occurred of considerable significance to Michigan labor. On that day the National Labor Relations Board held elections in 59 plants of the General Motors Corporation, scattered over 11 States. The result was a victory for the CIO; 60 to 70 per cent of the employees registered their preference for CIO representation, as over A. F. of L. Chrysler employees had previously registered an even larger majority for CIO.

Conservation and Recreation

WHEN the white man first came to what today is known as Michigan, he discovered a here-and-now happy hunting ground that had nothing to do with the Valhalla of the native Indian.

True, the entire territory was not overrun with game birds and animals, though most of the lakes and streams did teem with fish. Dense forests, forming canopies of deep shade, do not permit the wide variation of ground cover essential to the well-being of most wild species that man pursues for food or sport; but the savannalike openings of the south and old burns or breaks in the north, formed by marshes or the conjunction of different soil types with their varying tree growth, afforded conditions that made for large game and fur-bearing animal populations.

The energetic and resourceful whites, exploiting the resources they had discovered, set about on an unwitting campaign of extermination, which, within a century and a half, was to drive some species to actual extinction, remove others for all time from the lists of fauna within the State, and reduce still others to rarity.

It was not alone the introduction of new devices of the chase—the iron trap, the efficient net, and the gun—that depleted the fish and game supplies of the territory. The marked alteration of the face of Michigan by agricultural development and logging, with its consequent forest fires, was the factor that for a time threatened Michigan's standing as an attraction for nimrod and angler.

First, of course, went the fur. Beaver, the staple peltry of the industry, attained its prime value in the area that was to become Michigan, and it was here that the initial assault of traders and trappers upon a continent was concentrated. In a quarter century from the time the fur trade gained real proportions on the Great Lakes, the beaver was so reduced in number that its pursuit was not worth while for the majority of hunters. With the beaver went the fisher, the marten, the otter, and the muskrat.

The passenger pigeon, that fabulous species that darkened the sun by its migrating flocks, disappeared completely. Persecuted and commercialized, the bird departed the State in the 1880's, was never observed here again and, within a few decades, was doomed to pass from the face of the earth. The wild turkey, its natural home of oak and beech and hickory forests transformed into farm lands, became only a memory. The bobwhite quail, swelling in numbers as brushland farms of pioneers made for it a suitable environment, dwindled again, when clean farming methods became standard in agricultural practice.

Stragglings bison, inhabiting the oak openings of the south, fell to the long rifles of the first settlers. The few elk, which, however, ranged much of Michigan, were only a local memory when immigration began populating the territory in the first quarter of the last century. The white-tailed deer, the State's largest abundant big-game animal, harried by market hunters, persecuted by loggers and fire, was for a time reduced in numbers to a point where biologists, as well as sportsmen, feared for its future in the State.

The Michigan grayling, native to most streams of the upper portion of what is now the State's Lower Peninsula, declined so sharply in the logging era that, by 1900, the capture of a single specimen was a noteworthy event in an angler's experience. By 1935 the last grayling had vanished. The Eastern brook trout, native to rivers in the Upper Peninsula, and introduced to those further south when the grayling departed, could not withstand the intensive fishing that followed the development of the automobile and paved highway. The sturgeon of the Great Lakes still survives, but its occasional appearance may be a last stand. The tremendous schools of whitefish and Mackinaw trout, which once offered rich rewards for netting efforts, have been so greatly reduced that Michigan's commercial fishing industry is in a sorry state, indeed, harassed by low returns on its investment.

And yet, today, Michigan sells more hunting licenses in proportion to its population than any other State, its number of fee-paying anglers tops the list of all the States, and the annual take of fish and game is probably greater in its total than at any time in history. The per capita spread of trophies is thinner, of course; but the totals are astonishing.

This, Michigan people like to believe, is because the State Department of Conservation is a bureau second to none of all those in the Nation concerned with the management of outdoor affairs.

In the beginning, the State followed very closely the general, un-

imaginative, and ineffectual course common to all others in early attempts to repair damage to wild life wrought by the pioneer population. Close seasons were declared; open seasons shortened. Devices capable of wholesale slaughter were banned. Daily and possession limits of this or that species were lowered. And still the available supplies of fish and game dwindled.

In the early 1920's, the agencies directly concerned with outdoor affairs, which, ever since Michigan attained statehood, had been working individually and often at cross-purposes, were brought together in one department. For several years a process of defining duties and functions of the various divisions within the new Department of Conservation was carried through, and a policy of attempting to know rather than to guess in fish, game, and foresting matters was instituted by appealing to the State's best technical advisers, represented on the staffs of its educational institutions. In other words, a start was made at applying engineering methods to the conservation program, just as industry had been doing for decades. Finally, in 1929, an amendment to the act creating the Conservation Commission was passed, providing for the appointment of the seven commissioners for staggered terms, the vesting in that body of authority to hire departmental employees from director down, and its complete removal from partisan politics.

Thus, in the space of ten years, Michigan's Department of Conservation was changed from just another State bureau to one with dignity and independence.

One of the first attacks of the new order was on forest fire, perhaps the one greatest menace to wild life, both terrestrial and aquatic. Largely staffed by men trained in the country's leading colleges of forestry, the new Forest Fire Division took over a State containing 20,000,000 acres of recognized hazard area—much of it fresh slash left by loggers; half of it tinderlike uplands, thinly covered with volunteer forests of highly inflammable pine—which had lost up to perhaps 2,000,000 acres in yearly fires. Today, if the total yearly burn exceeds 50,000 acres, Michigan's fire fighters hang their heads in shame. This efficient force has 150 detection towers, so located that, with normal visibility, no smoke can rise in the State without being observed within a few minutes. For tools, it has equipment tested and designed at the world's first Forest Fire Experiment Station, located near Roscommon, ranging all the way from two-way, short-wave radio sets, used in directing attacks on running fire, to mighty, tractor-propelled devices for literally tearing fire-breaks through dense forest growth. For directing

intelligence, it has the product of intensive training courses conducted every few months for its hundreds of fire fighters, who are constantly on the job from April until November.

Another basic activity of the department is its program of reforestation. Michigan today has 12 State forests, with a total area of nearly 1,000,000 acres, on which approximately 75,000,000 seedlings have been planted annually. Its Higgins Lake Nursery, where pine is produced, is one of the world's largest. Its new Hardwood Nursery, a relatively unusual venture in conservation, is intended to supply species of trees and plants that provide food for game animals and birds.

Michigan has developed a series of game refuges, designed primarily for the protection and increase of the deer herd, which has functioned so well that it has presented another perplexing facet of the deer problem. Islands of sanctuary from guns, added to the increased range for deer because of fire prevention, has permitted the State's herd to multiply to a point where, in some areas, the available forage cannot support the deer present. Although the annual legal kill is estimated at over 40,000 bucks, an estimate places Michigan's deer population at more than 1,000,000 animals.

To attack such problems—the carrying capacity of given ranges, the food preferences of various species, the diseases, natural enemies, and environmental factors that prey upon a species—the department's game division has built up one of the finest staffs of young technicians in the country, who are constantly engaged in attempting to find answers to complex biological puzzles.

Not only does the big-game hunter stand an excellent chance of taking meat home in Michigan. The small-game enthusiast also has an equal opportunity. The annual legal kill of cock ring-neck pheasants—the species inhabiting the area that once yielded abundant bobwhite quail—is in excess of 750,000,000. The State is rated as the largest producer of northern partridge, or ruffed grouse. More than a quarter of a million are taken in a short season each fall. Sharptail grouse and prairie chicken have become major items on the hunters' Michigan list, and the yearly take of cottontail rabbits and varying hare runs into the millions.

In game fisheries, Michigan also ranks high. Its hatcheries produce fry and fingerlings in astronomical totals, but the State does not stop at artificial propagation in its attempts to keep its lakes and streams stocked. The Bureau for Fisheries Research, a co-operative project supported by the department and the University of Michigan, is constantly

experimenting in and investigating the where, how, and what of fishing. Lake and stream improvement, designed to offset the changed physical characteristics of waters by deforestation and erosion, was first tried in Michigan. Hundreds of miles of trout streams and thousands of acres of lakes are annually given attention within the State, to the end that their carrying capacities may be increased. In 1940, a new experiment station will be opened by the fish division, for the first thorough study ever made of the results of artificial propagation of trout. The State has purchased the headwaters and many miles of Hunt Creek, an important tributary to the Thunder Bay River, and will maintain on the area a staff of investigators, thoroughly equipped with laboratory facilities.

The Michigan Department of Conservation also administers 55 State parks, and is charged with the disposal or dedication of all wild, tax-delinquent lands, which now total in excess of 5,000,000 acres. It has control over the petroleum industry, which, in recent years, has lifted Michigan as a crude-oil producer to second place among those States east of the Mississippi River. It, naturally, enforces all fish and game laws. It has a staff of lecturers constantly on the road, instructing school children and their elders in basic conservation needs.

It is a busy bureau and, occasionally, the object of acrimonious debate, because no group under the sun is more prone to theorize and argue than are sportsmen. But Michigan is proud of its Department of Conservation, as is evidenced repeatedly. At each session of the legislature since the bureau was emancipated from partisan politics, some measure is introduced that threatens its independence and that, if passed, would tend to return it at least part way toward the level of a patronage-dispensing organization. On every such occasion, Michigan sportsmen have risen in their articulate might and blasted the proposals out of legislative halls.

The Great Lakes, providing a natural playground along more than 2,000 miles of blue-water shore line and more than 5,000 inland lakes, are the basis of Michigan's popularity in the field of recreation. As early as 1687, Baron La Honton wrote: 'You can scarcely believe what shoals of white fish are caught about the middle of the channel, between the continent and the isle of Missilimackinac . . . Here the savage catch trouts as big as one's thigh.' The same story, with minor improvements, is repeated today by hundreds of tourist agencies that advertise Michigan's scenic and recreational advantages.

Missionaries, explorers, and military men spread the fame of the

lakes country to European courts and abbeys. European state councils knew about Michilimackinac before the country was known to colonists on the Atlantic seaboard. The Mackinac country was first to attract attention as a summer resort, for friends and relatives of the British garrison were frequent summer visitors after the fort was occupied on Mackinac Island in 1761.

During the nineteenth century, Michigan's natural beauty was publicized by many writers. Alexis de Tocqueville, French visitor to America, described Saginaw in his *Book of Travels* published in 1835. Captain Marryat, English author, visited the Mackinac Country in 1855, and it was during this period that Longfellow wrote *The Song of Hiawatha*, with much of its setting in the Tahquamenon and Lake Superior districts. Other stories and articles, stressing the wild charm and healthful climate of the lakes region, attracted many visitors. Southern planters built summer residences on Mackinac Island to escape the heat of their own States, and residents of Chicago established resorts along the Lake Michigan shore. Wealthy businessmen from Philadelphia, Boston, New York, Baltimore, and Cleveland, who made summer trips into the Lake Superior country to inspect iron and copper mine investments, returned year after year with their families to enjoy the summer climate.

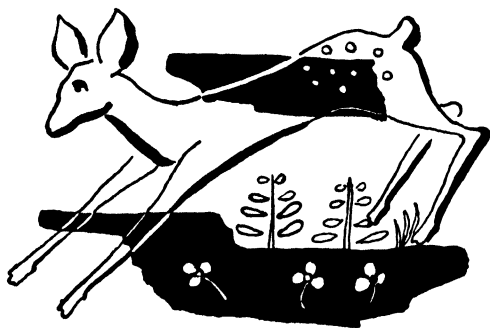
When large-scale lumbering operations spread north from the Saginaw and Muskegon River valleys in the second half of the century, the spectacle drew new visitors. Michigan's summer attractions became so well known that in 1881, when the Michigan Central Railroad was built through the northern part of the State, railroad officials planned the town of Topinabee (*see Tour 12*) solely as a resort center. Steamboat and railroad excursions became popular in the 1880's. Natives of Mackinac Island built carriage drives to accommodate the many visitors to that historic military base. While lumbering was at its height, few residents of northern Michigan paid much attention to the economic value of this tourist trade, but, in 1910, when it was obvious that the commercial value of Michigan's forests was exhausted, the summer visitor was quickly recognized as a new source of income.

Although the Detroit Convention and Tourist Bureau had been organized in 1895, it had little to do with the great stretches of wild land north of Bay City. In 1910, the Northeastern Michigan Development Bureau was started with 94 members, primarily to promote the settlement of farm lands; this agency subsequently became the East Michigan Tourist Association. The Upper Peninsula Development

Bureau, organized in 1911 to encourage agriculture, appropriated \$3,000 in 1916 to advertise the region as a summer playground and, thereafter, directed all its efforts toward increasing the tourist industry. The West Michigan Tourist & Resort Association, an outgrowth of the West Michigan Development Bureau, was organized in 1917.

Intensive development of Michigan's resort areas followed on the heels of highway improvement and large-scale automobile production. The importance of the tourist industry was recognized by the legislature in 1929, when it appropriated \$100,000 to advertise the State. Appropriations have followed each year thereafter.

Fishing, hunting, festivals, winter carnivals, and water sports (*see General Information*) attract many visitors to Michigan. Thousands of others spend the summers in the northern part of the State, to escape the effects of hay fever and asthma; from the Grand Traverse region to Lake Superior, the air is free of irritating pollens. Michigan's income from tourists in 1936 was estimated by the United States Chamber of Commerce to exceed \$300,000,000, and other estimates were higher. The 1937 income was approximately \$400,000,000. Highway traffic counts indicate that three-fifths of all motor traffic in Michigan is of recreational or social origin. Consequently many of the State highways are now designed primarily for recreational use.



Social Institutions

MICHIGAN is indebted for the development of its social institutions to priests, teachers, humanitarians, and legislators, with their sometimes overlapping, sometimes conflicting, interests. To discuss the growth of churches, schools, and social agencies as though their social roles were mutually exclusive is to oversimplify, particularly with reference to the State's early history; but such simplification is necessary in a brief account.

In the first half of the seventeenth century, a small band of Jesuits, at once missionaries, explorers, and teachers, entered the region of the upper Great Lakes. They wrote constantly to the French authorities of the riches of this land; and late in the century the Government of France began to make an effort to exploit the region commercially. Detroit was founded by Cadillac in 1701, mainly to control the fur trade, and gradually took on the aspect of a trading and agricultural community, although fortified in frontier style. What had, in the earlier years, been a question of simple teaching and conversion had become a more complex one, intimately related to military and commercial need.

THE ROLE OF THE CHURCHES

The second oldest continuously maintained parish of the Roman Catholic Church in the United States is Ste. Anne's, Detroit, established two days after Cadillac's landing. During the settlement period, the population was composed almost wholly of French colonists from Quebec and, hence, was almost solidly Roman Catholic. When the English took over Detroit in 1760, there were only 360 adult male Protestants as against 150,000 Roman Catholics in all of Canada.

In 1798, two years after the American flag had been raised over Detroit, Father Gabriel Richard (1767-1832) was sent to assist at Ste. Anne's. He took over the pastorate in 1802 and devoted the remainder of his life to the service of his fellow men. He inspired the

citizens in their faith; he cared for the sick, nursing cholera victims as fearlessly as he attended those suffering from less dangerous afflictions; he organized two boys' and two girls' schools and thus became Michigan's first educator; he brought in the first printing press and was instrumental in laying the foundations of higher education. Father Richard, as Territorial Delegate, was the only priest ever to serve in Congress, and during the War of 1812, which almost wrecked his educational enterprise, his political concern for the Territory became manifest when he bade his congregation to hold fast to the American cause (*see Detroit*). His contributions to Michigan's progress place him among the foremost pioneer priests in America; and his activities, stopped short by the cholera that he had helped to fight, exemplify particularly well the interrelated beginnings of social, religious, educational, and political institutions.

Active Protestantism made its appearance in the early nineteenth century, and its youth in Michigan was indeed difficult. Ministers came for the most part from New England and were resented, even by the scattered Protestants, because of their pronounced Yankee speech, thought, and manner. One after another, they gave up and returned to the East. Not until the 1820's, when an ever-increasing number of pioneers began pouring into the Territory, largely from New York State and New England, did Protestant faiths formally establish themselves.

This influx created some friction, since Michigan was developing the seventh-largest Roman Catholic population in the Union—a fact that was to embitter the Protestant people in several areas of the present State for almost a century. Protestants increased in numbers, but they did not attain political control of the State, largely because they were not an organized force. However, they did prevent the Catholics from gaining complete control; for antagonism to Catholic dominance, or in some cases even to Catholic participation in political life, was one policy upon which all Protestant sects could agree.

With the establishment of separate State and sectarian colleges, education was partly freed from its religious character, and the churches thereafter, in large part, followed a normal course of caring first of all for the spiritual life of their adherents. This divorce from problems of general welfare was made final, however, only after the State had taken over the major part of the work of social agencies.

Several religious and social movements have originated in Michigan or found a haven here. In the latter category is the Reformed Church,

which was introduced by Hollanders who settled in southwestern Michigan in 1846-7. The Christian Reformed Church (in North America), which underwent many changes of name before the present title was adopted in 1890, was founded in Michigan in 1857, following secession from the Reformed Church. These two denominations have been religious and educational leaders in Kent and Ottawa Counties for many years (*see Holland*).

The Seventh-Day Adventists removed their headquarters from the East to Battle Creek (*see Battle Creek*) in 1855, about ten years after the sect's formation. During its 48 years at Battle Creek, the denomination carried out a health reform and missionary program, which in time reached every continent and island group on the globe. The general conference offices are now at Washington, D. C.; Battle Creek still has the largest congregation of the Seventh-Day Adventist Church.

Possibly best classified as a cult, the House of David was founded in 1903 by Benjamin (King Ben) and Mary (Queen Mary) Purnell at Benton Harbor (*see Benton Harbor*). Known to the country for its bearded baseball teams, its factional squabbles, and the public charges of immorality that its founders once faced, the House became divided after the death of Purnell, and its two factions now pursue separate careers.

Among the smaller religious groups in Michigan are Amish and Mennonite sects in several villages and an Islam cult of Negroes who have accepted Mohammedanism. The Mormons obtained a foothold in Michigan in 1847 (*see Beaver Archipelago*), but, following the murder of their leader, King Strang, in 1856, 2,600 of them were expelled from the State.

Among the socio-religious innovations of recent years have been the radio broadcasts—begun in 1926—of Father Charles E. Coughlin, of Royal Oak, Michigan. In the depression days of the early 1930's, his addresses upon economics and the Christian responsibilities of the 'haves' toward the 'have nots' attracted a national audience. His National Union for Social Justice attained a tremendous membership in a short time, and for several years after its inception Father Coughlin, as its virtual dictator, was reckoned a political power, as well as credited with arousing laboring men to the possibilities of group action.

Bishop Gallagher earned the designation 'the building bishop' for the large number of church and school buildings erected during his episcopacy (1918-37) to accommodate Michigan's increased Roman Catholic population; this had grown, during the 10 years following his

appointment, from 200,000 to 600,000. The bishop's work laid special emphasis upon education.

It is still too soon to gauge the significance of the closer relations established recently by the Protestant denominations of Michigan. The Detroit Council of Churches, representing approximately 400 of the 800 churches in Detroit, and the Michigan Council of Churches and Christian Education have been concerned with organizing noonday Lenten services and Tre Ore observances, with promoting inter-church athletics, with social service, and with the larger problems of social justice and world peace. The conference for the Protection of Civil Rights, begun in 1935, includes prominent Baptist, Methodist, Evangelical, and Congregational ministers among its workers.

Michigan has more than 90 registered denominations, with 1,786,831 adherents, and of these the Roman Catholics form the largest group. Among Protestants, the Methodist denomination, which maintains about 25 per cent of the State's 5,709 church buildings, is numerically the most important. The Northern Baptist, Lutheran, Presbyterian, and Protestant Episcopal communions follow in the order named. Negroes make up a third of the Baptist strength in adherents and structures owned. The Jews, centered in Detroit, have constructed in that area 52 synagogues and temples, to serve a membership of about 73,000.

EDUCATION

Until 1808, when Father Richard obtained the support of the legislature of the Territorial government, educational facilities in Michigan were negligible. There were a few missions for Indians; and one or two laymen had attempted to establish 'classes' at Detroit, but these had failed chiefly because the self-appointed instructors were poorly qualified. Father Richard instituted local schools for both Indians and whites, the first vocational or training schools in the country. His pedagogical ideas—combining the 'three R's' with manual training and domestic arts—helped fix the educational pattern that, more fully developed, was to make Michigan's school system widely known.

Father Richard was also chiefly responsible for the founding of the University of Michigan, first State university in the Nation. In response to the proposal of Richard and his friends, a charter was issued by an act of the governor and judges of the Territory of Michigan in 1817; and the Catholepistemiad, or University of Michigania, was established at Detroit. Among those who worked with Father Richard on this

project were William Woodbridge, Judge Augustus B. Woodward and the Reverend John Monteith. The latter (as first president) and Father Richard composed the original faculty of the Catholepistemiad, the name of which was changed to the University of Michigan in 1821, when provisions were made for creation of a board of trustees. The university was transferred to Ann Arbor and reorganized under a board of regents, when Michigan was admitted to the Union in 1837.

Educational work throughout the Nation was badly organized, until the achievements of such men as Henry Barnard and Horace Mann began to attract wide attention and emulation. What Barnard did for the schools of Rhode Island, and Mann for those of Massachusetts, the Reverend John D. Pierce accomplished for Michigan schools. At Marshall, in 1833, in collaboration with General Isaac E. Crary, first attorney in Calhoun County, and representative of Michigan in Congress from 1835 to 1840, the Reverend Pierce drew up plans for establishment of a State-wide public school system and recommended creation of the office of State Superintendent of Public Instruction. In 1837, Michigan adopted Pierce's plan—later incorporated in the State constitution—and appointed him its first superintendent. Ohio established a similar office the same year, and other States followed suit. Michigan, however, may fairly claim to be the first State to establish a public educational system essentially of the type known today.

Pierce's educational plan, patterned after the 'Prussian system,' was based upon free schools operated at public expense, under State supervision, and with three divisions: the common school, the academy or high school, and the university. A report that Pierce submitted to the legislature in 1837 recommended that district boards, each composed of a moderator, a director, and an assessor, be authorized to levy taxes for the erection and maintenance of schools. Officers with like duties and rights were to be appointed in a second division, the township. The people were to select a board of school inspectors to establish new districts, supervise teachers, inspect schools, and distribute money received from the school fund. The legislature adopted Pierce's report, except in a few minor particulars. The panic of that year, however, almost wrecked the plans. The poverty of the settlers, their general apathy, and ignorance of the importance of free schools made it seem unlikely even to his supporters that Pierce's ideas would ever be put into practice.

Nor did the trouble end with the return of good times. Public elementary schools were constructed in Detroit in 1842, although there

was no public high school until 1858. Within three years of the inauguration of the Pierce program, the Board of Education was drawn into a controversy that again placed the public educational system in jeopardy. The subject of contention was whether or not the Bible should be used in public schools. It was finally decided that a teacher might open sessions by reading from any version of the Bible, but that comment upon the text would mean the teacher's dismissal. This ruling was widely followed throughout the State.

In 1921, the legislature enacted a law giving the Superintendent of Public Instruction supervision of all private, denominational, and parochial schools, and directing that the courses of study and the qualifications of teachers in such schools should be of the same standard as those provided for general public schools.

Higher education developed rapidly and with little religious controversy. Between 1840 and 1880 most of Michigan's colleges were established. Many of them, of secular origin, are still important educational institutions. Protestant colleges include those at Albion, Olivet, Alma, Holland, and Hillsdale; among outstanding Catholic colleges are the University of Detroit and Marygrove College (for women), at Detroit.

In 1857, Michigan State College of Agriculture was opened at East Lansing (*see Lansing*). This was the first agricultural college in America, and in 1862, largely as a result of its accomplishments, the United States Land Grant College Act was made law. Michigan Agricultural College, as it was called until 1925, became a model for similar institutions throughout the country. Michigan State Normal College (*see Ypsilanti, Tour 1*), begun in 1852, was the first normal school west of Albany. Between 1890 and 1905, other teachers' colleges were founded: Central State at Mount Pleasant (*see Tour 12*), Western State, Kalamazoo, and Northern State, Marquette.

Organized under an act of the 1885 legislature, the Michigan College of Mining and Technology, as it is now known, was opened at Houghton in September of the following year. Originally called the Michigan Mining School, and later the Michigan College of Mines, it was given its present name because of the broadening of its scope. The degree of Bachelor of Science is conferred for various technical and scientific courses. In 1939, 139 students were graduated.

The University of Michigan was transferred from Detroit to Ann Arbor when a grant of 40 acres was made to the institution by a land company. It opened there in 1841 with two teachers and six students. When Dr. Henry Tappan became its president in 1852, the university

began to acquire the reputation that gave it world prominence for many years. Eleven years later, the board of regents used its power to remove Dr. Tappan.

The University of Michigan owes much of its prestige to the able administration (1871-1909) of President James Burrill Angell. Scholar, diplomat, and statesman, as well as one of America's great educators, he developed the organization begun by Dr. Tappan and contributed much to the progress of higher education in the State.

Michigan's industrial growth has led to the establishment of several private technological institutes; among the more important are those administered by Chrysler, General Motors, and the Ford Motor Company. Ford Motor's 1,100 acres at the River Rouge Plant (*see Dearborn*) serve as a campus for more than 4,000 students enrolled in trade school and apprenticeship courses. The company's school system consists of three divisions—the Henry Ford Trade School (which includes scholastic courses), the training school for high-school graduates, and the apprentice school—affording students opportunity to become proficient at trades and providing the organization with company-trained recruits for highly skilled jobs and eventually for foremanships. In the development of its commercial art and technological divisions, Cass Technical High School, Detroit, has set a high standard for all public schools.

Outstanding among the private schools of the State are the schools of the Cranbrook Foundation (*see Tour 5A*) and the Merrill-Palmer School (*see Detroit*). The former, with a foundation fund of more than \$20,000,000 contributed by Mr. and Mrs. George G. Booth, includes an elementary school for boys and girls from kindergarten through the sixth grade, a preparatory and cultural school for boys from the seventh through the twelfth grade, a correspondingly organized girls' school; an institution promoting instruction and research in sciences; and an academy of art. The Merrill-Palmer School was founded in 1920 under the will of Lizzie Merrill-Palmer, widow of Senator Thomas W. Palmer, to train young women for 'the function and service of wifehood and motherhood, and the management, supervision, direction, and inspiration of homes.' In 1922, a nursery school was opened for children eighteen months to five years of age; it serves as a laboratory for teaching child care and training. The Merrill-Palmer School has developed what is virtually a college curriculum in child-development study and has furthered knowledge in several sciences, as in the biochemistry of human milk.

A contribution of particular importance to Michigan's educational technique was made in Hamtramck (*see Hamtramck*) between 1923 and 1935 by the late Dr. M. R. Keyworth. Dr. Keyworth's plan was especially designed to overcome the difficulties involved in instructing the children of foreign-born parents. Its principles, varied in manner and degree, have been successfully applied in other cities.

There are 18 colleges and universities in Michigan (5 of the most important are denominational), 6 teachers' colleges, 11 junior colleges, 8 professional schools, 12 private schools, 465 parochial schools, a number of technical schools, about 1,600 high schools, and 6,800 public-school districts supplying elementary education. Enrollments for 1934 (latest publication of complete figures) were: universities, 29,317; private and denominational colleges, 10,548; high schools, 226,479; and primary schools, 702,903.

SOCIAL WELFARE

Social agencies as such were slow in making their appearance in Michigan. The Detroit cholera epidemic of 1832 was fought by priests and philanthropic laymen, as lesser ills had been previously. During the epidemic of 1834, a temporary hospital was set up in a building that Bishop Rese had purchased to remodel for Catholic use; this is believed to have been the first civilians' hospital in the Middle West. Father Martin Kundig, formerly assistant at Ste. Anne's, then priest of Holy Trinity parish, directed the hospital work, carrying in the sick on his back when carts were not available, nursing them, playing a guitar and singing to relieve their terror, and burying the dead, when others feared to perform the task. By such labor, and by the unstinting use of private resources, individuals met the plagues and poverty that crept into Detroit. The earliest publicly supported institution for the indigent was the county house (poorhouse) opened at Detroit in 1832, after many delays, due apparently to a conviction that poverty, illness, and disability were of no public concern.

Following his hospital experience, Father Kundig built a home and school for orphans of cholera victims on the property adjoining the county house. The first orphanage in Michigan, Father Kundig's institution, appears to have been wholly supported by the church, except for \$3,000 initially voted by the State. In 1836, Father Kundig was appointed superintendent of the poor, for whom he agreed to care at a

rate of 22¢ a day each. There were about 100 persons in the poor-house, 60 of them bedridden.

When the panic of 1837 threatened the existence of both these institutions, Father Kundig used his own funds for their support; five years later, owing in part to failure of the county commission to share in the support of the poor farm and the orphanage, he was declared insolvent. The clothing of his charges and his own effects, which included his guitar, were sold to satisfy his creditors. Later, while vicar general of a diocese in Wisconsin, he paid his debts to the penny.

Conditions prevailing in early public charitable institutions are suggested by the fact that, for years after the removal in 1839 of the Wayne County (Detroit) Poorhouse to Nankin Township (*see Eloise, Tour 1*), the inmates were domiciled in parts of the old log-built Black Horse Tavern, where indigents, whether well, sick, or insane, were cared for in the same quarters, and where, as late as 1845, several idiots were chained in the horse stalls.

The first permanent hospital in Michigan, St. Vincent's, was established in a log cabin at Detroit by four Sisters of Charity in 1845. It was renamed St. Mary's when it was removed five years later to a site close to its present location.

For a long time the State government did not contribute to the care of the indigent except in Detroit; the burden fell on the churches, which, in compliance with the Ordinance of 1787, carried on the work, usually without State funds. The end of the churches' last direct civic responsibility was presaged in 1848, when the legislature provided for an asylum for the deaf, dumb, and blind, and another for the insane. Six years later the education of eight children—seven deaf and one blind—began in a small building in the village of Flint. In 1874, the State Public School (*see Coldwater, Tour 12*) was opened to care for destitute children. This institution served as a central receiving station, where children surrendered by indigents to the State were kept and taught, until they could be placed in private homes under the school's supervision.

Despite such pioneer work, it was not until 1921 that a State welfare department was created with five commissions—welfare, corrections, prison, institute, and hospital. Each commission, although often severely hampered by lack of funds, has done good work. The plan was hampered, however, because of the State Welfare Department's inability to co-ordinate and prevent overlapping of the various activities. This con-

fusion was increased by the establishment of an emergency welfare relief commission in 1933, whose independent character under the law often gave rise to conflicts of jurisdiction.

The prison commission has made real progress in adequately housing, feeding, and clothing an ever-increasing prison population, although the problem of rehabilitation, through the provision of employment for prisoners, remains unsolved. Conditions in the county jails are poor by comparison, and often draw sharp criticism.

Handicapped by insufficient funds, the hospital commission faces its most difficult task in caring for the mentally ill. Fifteen thousand patients are crowded into hospitals that can hygienically accommodate only 11,000. In 1936, Michigan, eighth State in population, stood thirty-second in its provisions for mental cases. A four-year hospital program begun in 1929 broke down under the weight of the depression. In 1937, another program was approved by the legislature, providing for an appropriation of more than \$17,000,000 for hospital buildings during the first two years; this will increase the number of beds for mental patients by about 2,000. The plan includes appropriations for several kinds of hospitals and increased facilities for tuberculosis patients. The problem of hospitalization at public expense for victims of tuberculosis, however, has not yet been fully solved.

In caring for the general public health, Michigan stands high among the States. Full-time health service is available under recently enacted State laws; of the 83 counties, 36 have public health nurses; and many counties have individually organized health departments. Paul de Kruif, in *Why Keep Them Alive?*, points to Detroit to prove that, if health department executives are intelligent and aggressive, and if medical men are true to the best traditions of their profession, disease can be conquered even without a tremendous expenditure. The fight against children's diseases has been particularly successful, and in this the health commissioner, the director of the school health service, and the doctors attached to Detroit hospitals have co-operated. During the depression, when money was scarce and the staff of visiting doctors had to be reduced, the teachers undertook to watch the health of their charges; and so expert did they become that their diagnoses of children's diseases were 97 per cent correct.

Michigan has an excellent record in handling juvenile delinquency and some phases of child welfare, and has often assumed leadership in specific divisions of this work. Two funds that have done much to insure the good health of Michigan's children are the Kellogg Fund

(see *Battle Creek*) and a children's fund of \$12,000,000 from the late Senator James Couzens. The latter is devoted to public health, child guidance, medical research, special attention to dependent and semi-dependent children, and grants to the growing agencies of the State. Established in 1929, the fund was reported in July 1937 to have aided approximately 375,000 children during the fiscal year then closing. The Kellogg Fund, supporting both national and local programs, is dedicated in Michigan to the establishment of health centers in seven counties, where doctors, dentists, nurses, teachers, and health directors join forces to create an effectual health partnership with parents and children.

The Michigan State Hospital for Epileptics at Wahjamega, an institution for routine custodial care and special therapy, established in 1938 a school for epileptic children, with the hope of contributing valuable material in the study of the pre-epileptic child. It is probably the only school of its kind.

The Wayne County Training School, opened at Northville in 1926, is employing new methods in the training of higher grade mentally deficient children. Since about 70 per cent of all criminals are believed by judges of juvenile courts to come from the upper stratum of sub-normal children, the training school's record of rehabilitation seems particularly significant. A majority of the 1,500 children who have entered the school have been released and are now law-abiding, useful, and, with few exceptions, self-supporting members of society.

The latest development in the handling of juvenile delinquency is the so-called 'Michigan Plan,' sponsored by the recently established Michigan Child Guidance Institute, for uniting courts, churches, schools, police, civic leaders, and the State government in co-ordinated action. The institute, established by an act of the legislature, is assembling statistics on juvenile delinquency, studying treatment methods, and co-ordinating the work of private and public agencies. It provides diagnostic service for schools and courts, examining problem children in the co-operating counties. Treatment recommended is carried out by local agencies with the advice of an institute assistant. The institute is specifically limited by law from undertaking treatment itself.

Other recent developments in child welfare are manifested in the activities of the Michigan Children's Village. It occupies the buildings of the former State Public School at Coldwater, whose occupants were transferred in 1935 from the old school to the Michigan Children's

Institute at Ann Arbor. The directors of the Children's Village, charged with caring for mentally deficient children, are experimenting with the classification of subnormal cases and with individual training. Academic and vocational training are given, within the limits of each child's intelligence. In 1939, the name of the village was changed to the Coldwater State Home and Training School, and a building program was started, which is expected to bring the institution's child population to about 1,000.

The Children's Institute at Ann Arbor represents the application of modern science to the destitute child problem. Formally opened in 1936, it is, like the old State Public School, a receiving home to which normal dependent or neglected children under 14 years of age may be committed for care and placement. A limited number of cases may be retained for study, for special reasons, but the majority are placed in family homes. Children are released from supervision by adoption or restoration to the parents; the latter practice was not permitted by the State Public School.

Michigan's welfare problem did not become acute until the 1930's, when two factors gave rise to a particularly trying situation: rapid industrial expansion between 1920 and 1930 had been accompanied by a population increase of 32 per cent, a figure surpassed by only two States, Florida and California (*see State Development*); and settlers on large areas of stripped timberland in the northern regions were discovering that the soil would not yield profitable agricultural crops. Michigan's population dropped 28 per cent by 1935, but this reduced the pressure only slightly, for by that time a still larger percentage of the population was in distressed circumstances. One-fifth of Michigan's employables were without work in January 1935.

Passage of social-security legislation by the Federal Government in 1936 gave tremendous impetus to the modern trend away from private philanthropy toward governmental provision, and prompted legislative proposals for the co-ordination of State agencies in 1938.

While these proposals were defeated by referendum in the general election of November, an act of the 1939 legislature created the State Department of Social Welfare, a section of the government designed to effect the same reforms. The department supervises and assists in all welfare and relief work of the State and its subdivisions. Under provisions of the act, five previous acts were repealed, and the divisions these acts had created were brought together under one central body.

Michigan was one of the first States to have its old-age pension acts

and administrative services approved by the Federal Social Security Board; and, shortly afterward, it passed legislation sanctioning social-security contributions for unemployment compensation (the first payments of which began in July 1938), for old-age benefits, for the needy blind, and for dependent children, in connection with which agency mothers' pensions are administered.

The steps being taken to care for the needy aged may be cited as indicative of reform already under way. There were but 5,700 persons over 65 years of age in the State in 1880, but the number has continuously increased, and a special census in 1935 showed that, despite a decrease in the total population, the number of those more than 65 years of age had risen to nearly 275,000, almost 6 per cent of the total. More than 27,000 were in almshouses; a survey revealed that at least 20 infirmaries or poorhouses were in a deplorable condition, some of them having been condemned as firetraps.

Peak period of the extension of old-age assistance was reached in June 1939, when 83,275 persons received payments totaling \$1,369,425. By December 1939, however, this figure was reduced to 77,476 persons receiving aid to the extent of \$1,275,813, chiefly because of the fact that not enough funds were appropriated by the legislature to match the amount guaranteed by the Federal Government. According to Dr. Phillip A. Callahan, State social security director, if help were extended to all those who had applied and who were qualified under the existing law, the load would be in the neighborhood of 110,000.

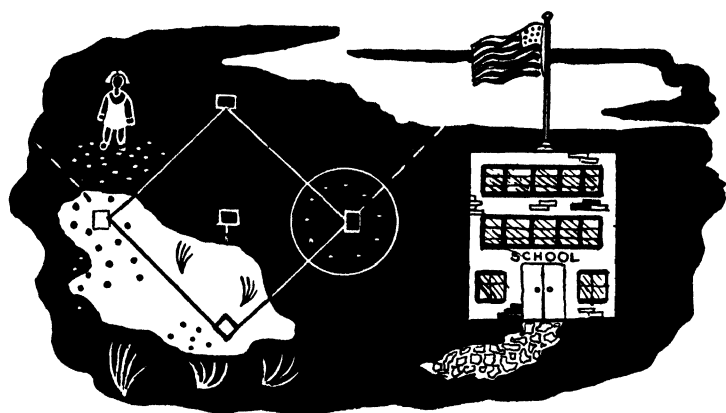
Beneficiaries are of three kinds, according to Dr. Callahan. The first, and largest, group is made up of workers who have reached the age of 65 and wish to retire. The second includes the families of beneficiaries who have died since the first of the current year, if the wife has at least one child or is herself more than 65 years old. The third division is comprised of dependent parents of unmarried breadwinners.

Many recipients of old-age assistance are individuals who, under the present plans for abandonment of the poorhouses, had been removed from institutional life. Many will never have to leave their own homes. Those whose illnesses or other confinements make institutional care necessary are being transferred to modern, well-managed public hospitals and homes or to private homes that are approved and supervised by the State. In each instance, people in need of old-age assistance are being helped to live as normally as possible.

Integration of Federal and State relief services in this division of

social welfare, as in many others, makes possible co-operation between departments, reduction of the number of local agencies, and the elimination of innumerable inequalities.

In addition to State agencies, there are hundreds of private ones operating under community chest, church, and other philanthropic organizations. These fill in many of the gaps in the public system of social institutions.



Racial Elements

MICHIGAN'S population is noted for its heterogeneous character. The State's percentage of foreign-born is greater than for the country as a whole. Detroit is the fourth American city in population but third in the number of foreign-born. In 1926, 1929, and 1930, Michigan ranked second to New York as the immigrant's specified destination. The census of 1930 gives Michigan's foreign-born white population as 840,268 and the native-born of foreign parentage as 1,445,865. Foreign-born white and native-born persons having one or both parents foreign-born compose 47.2 per cent of Michigan's population. In 24 counties of the State the foreign racial stock constitutes more than half of the population; Keweenaw County in the mining range has the largest proportion, 82.2 per cent.

The mining and lumbering industries were leading factors in Michigan's population growth during the post-Civil War expansion. In the twentieth century, opportunities for work in the automobile industry brought another great influx of immigrants. The motives that brought these and earlier immigrants to America are summed up in the desire for land, jobs, peace, and liberty.

Michigan was first opened to white civilization in the latter half of the seventeenth century, when French explorers, accompanied by black-robed Jesuits, entered the territory and claimed it for God and the king. French fur traders pressed into the region, establishing posts at strategic points along the lake shore and inland on the rivers. The Jesuits founded missions and sought to Christianize the Indians. The *voyageurs* and *coureurs de bois* took Indian wives; the children of such unions were almost invariably reared as Roman Catholics. In time the trading posts became permanent settlements, many of which survive as thriving cities with a 'French-town,' or at least a few families of old French or French-Indian stock. Monroe in the extreme southeast corner of the State and Sault Ste. Marie in the Upper Peninsula are examples of French racial tenacity. Other remnants of French culture

persist in place names, *voyageur* canoe songs, and especially in folklore.

When Sieur Antoine de la Mothe Cadillac arrived at the site of Detroit in 1701, he brought 50 settlers, who were granted long ribbon-like tracts under a system of feudal tenure that developed into ownership. Additional land grants followed the same topographical pattern. The subsequent Anglo-Saxon conquerors, disgusted by the French settlers' refusal to sell their holdings, referred to the narrow farms as 'long-tailed patrimonies.' The French accepted the English, and later the Americans, as their military masters, but stubbornly resisted commercial and political innovations. Puritanism was profoundly modified by the Catholic tolerance, economic conservatism, and frank zest for living of the Gallic temperament. The Frenchmen were the tutor woodsmen in Michigan's lumbering industry and brought the germinating Paul Bunyan legend to the Saginaw pineries.

The vigorous interplay of racial groups that characterized Michigan's nineteenth-century pattern began in 1825 with the opening of the Erie Canal. The population had declined after the War of 1812, and in 1820 Detroit had less than 2,000 inhabitants. Perhaps those who wished to hold Michigan for the fur trade had helped circulate the myth that its hinterlands were dismal swamps unfit for farming. In 1825, however, under the impulse of transportation profits, Michigan was extensively advertised as the shining goal at the end of the immigrant's journey through the Erie Canal.

First to respond to the alluring descriptions were Americans from New York and the New England States, estimated at two-thirds of Michigan's population in 1837. Many stopped in Detroit, which was soon transformed into a city; others followed the 'Great Sauk Trail' and pre-empted the rich Government land in the southern tiers of counties. Coming from organized States, these immigrants, unlike the native French, were already experienced in self-government. Inevitably, the newcomers assumed political control. New York and New England forms of government were written into the constitution, and New York jurisprudence into the laws. The Scotch and English already in the territory fused politically with the Americans.

The first German immigration took place between 1830 and the unsuccessful German Revolution of 1848. In the latter year, Edward Hughes Thompson, Commissioner of Immigration, was sent to Germany with the avowed object of inducing German emigrants to buy land in Michigan. '*Der Auswanderer Wegweiser, The Emigrant's Guide to the State of Michigan*, published at State expense, offered a wealth

of scientific, commercial, and agricultural data. Lake and river transportation were stressed, and the price of land was listed at \$1.25 an acre and lower. It is officially recorded that these efforts directed 'a stream of valuable emigrants to the State.'

The first sizable German group settled in Washtenaw County in 1830, and the first German church in Michigan, two miles west of Ann Arbor, was dedicated in 1833. The parish was part of a missionary colonization movement that, before 1848, founded the famed Frankenmuth settlement in Saginaw County. In the community, the German language and many folk customs survive today as elements of a proud heritage. Loyalty to the Lutheran Church is combined with a sturdy social independence, springing in part from prosperous ownership of land. There are no delinquent taxes in Frankenmuth Township. If that prospect threatens a depression-struck citizen, his neighbors quietly 'pass the hat' for him.

German artisans and skilled workers hold high places in the history of Michigan industry. The Germans' leading role as immigrants lay, however, in the development of Michigan agriculture. Always they built schools and churches. At the outbreak of the first World War, there were approximately 200 congregations in the State using the German language in whole or part.

Contemporary with the Germans came great numbers of Irish, migrating as unskilled workers from a land of extreme poverty. The 'potato famine' of 1845 was only one factor that drove them from a miserable environment. In Michigan, they were laborers, hodcarriers, Upper Peninsula miners, and the brawn of the lumbering industry. The Irish loved the land, but, unlike many Germans, they had to accumulate savings through years of hard labor at low wages before they could buy farms. Hence they seldom established rural colonies, although many went eventually from lumbering to farming. Beaver Island, with its farming and fishing, is an example of a section predominantly Irish.

Other immediate contemporaries of the German immigrants were religious refugees from the Netherlands. A revival movement within the State Church had resulted in secession, and narrow ecclesiasticism induced persecution of the 'Secessionists' by the civil authorities. In September 1846, Dr. A. C. Van Raalte, a leading secessionist pastor, sailed from Rotterdam with a party of 53 persons and landed in Detroit two months later. After some prospecting, he found an uninhabited, well-wooded region extending to Lake Michigan, between the Grand and Kalamazoo Rivers. Here he bought 1,000 acres of Government

land and settled his flock, naming the site Holland after the mother country. Soon afterwards came 457 fellow refugees. They bought a section five miles east of Holland and named it for their home province, Zeeland. Others followed, settling the 5,000 square miles surrounding these towns and spreading to Kalamazoo and Kent Counties. The 1930 census enumerated 45,091 persons of Netherlands stock in Kent County.

The Hollander is individualistic in his means of earning a living. In the city, he is usually a craftsman or skilled worker; in agriculture, a specialty farmer. He helped build the fruit industry of western Michigan, the furniture industry of Grand Rapids, and made Zeeland famous as a baby-chick center. He drained the marshes around Kalamazoo and made it the 'Celery City' of the world.

The refugees' original aim 'to make the colony Christian' has persisted through the generations. Observance of the Sabbath is strict; in Holland and Zeeland, public dance halls are not permitted. Altogether, the Holland-American element exercises a strong if not predominating influence in southwestern Michigan.

The Finns too, have settled in compact groups, the majority of them on 20 racial 'islands' in the Upper Peninsula. Because of their great physical endurance, they are famed as miners and loggers, but farm ownership is their ideal. The distinctive Finnish contribution to the State is realistic development of the co-operative. Shortly after the 1913 strike in the Copper Country, when merchants refused credit to the striking miners, the Finns initiated their own co-operative stores. A 1937 survey in eight Upper Peninsula counties listed 35 co-operatives, all but four predominantly Finnish. The majority are consumer co-operatives of the Rochdale type, but some are also sales agencies for their farmer members. Dairy co-operatives flourish, and some communities have co-operatively owned threshing machines.

The history of Swedish immigration is colored with interesting contrasts. In the lore of the early mining and lumber camps, the Swedes were fighters of bloody renown. In 1863, a contract-labor group of 300 broke away from the mining company that had paid their fares to the Upper Peninsula and found themselves better jobs. In 1870, the Grand Rapids & Indiana Railroad, undeterred by the previous incident, sent an agent to Sweden and Norway, offering inducements to settle on its tributary cut-over timber lands. Thousands responded, and today their descendants in Kent, Muskegon, Mecosta, Osceola, and Leelanau Counties are farmers and professional and business people, completely as-

simulated into their environment. Swedish groups in the Upper Peninsula counties of Delta and Dickinson, however, retain many national characteristics.

Both Swedes and Norwegians object to a common classification, despite joint membership in local 'Skandia' societies and the many parallels in their history as workers and immigrants. The Danes are well organized in Detroit, but frequently join their fellow Scandinavians' social activities in the smaller cities, while also asserting their distinctive ethnic character. Members of the three groups have emerged readily from the manual-labor classes and are to be found throughout the State in skilled trades, business, and professions.

With the exception of the Hollanders, members of all the foregoing racial groups worked in the Upper Peninsula copper and iron mines. Generally their tutors and foremen were Cornishmen, from County Cornwall, England. The Cornishmen understood the technique of deep-mining construction and were also captains, shift bosses, and mining directors. For a time the English were politically dominant in mining towns, but their tendency to favor their own nationality united other racial groups and caused their displacement.

The Poles, too, worked in the mines, but the great majority became factory workers and farmers. Their entrance into industry coincided with the end of the lumbering era. They were the last immigrants to enter agriculture in large numbers. Though noted as a thrifty self-denying worker, the Pole's most obvious community characteristics are an intense feeling for his homeland and a love of gay festivities. When the Pole takes a holiday, it is not to rest, but to march behind his red and white national banner—today in tragic status—hear and make speeches, dance, feast, and drink, in exuberant overflow of spirits.

The history of Posen Township, near Rogers City in Presque Isle County, is a minor epic in Polish group achievement. A group of Poles, invited by a lumber company, arrived in 1872. They cut the timber, bought the cut-over land with their savings, and developed some of the best farms in Michigan. The community remains almost entirely Polish and has its own 12-grade parochial school of 600 children.

Almost half of the Poles in Michigan are in metropolitan Detroit, constituting the largest single racial group in Michigan's mass-production industries. Hamtramck, the 'Polish City' surrounded by Detroit, has a population of 56,268, of whom more than 80 per cent are of Polish stock. Poles are concentrated also in Lansing, Saginaw, Bay City, Grand Rapids, and Flint.

The Italians came to the Upper Peninsula mining towns in large groups about 1880 and form distinctive ethnic communities there today. Highly mobile workers, the Italians migrate from State to State in search of jobs. Beginning in 1914, they poured into Wayne County from all parts of the United States, to work in the automobile factories. Clannish in their internal groupings, they are divided into many organizations. In the Detroit area alone, they support three Italian newspapers and 101 musical, literary, fraternal, and political societies.

As one of the largest racial groups, the Negroes command a special place in Michigan's social pattern. They were brought in as slaves shortly after 1701, but the period of their bondage was comparatively unimportant. Michigan entered the Union as a free State in 1837 and by 1840 had begun an offensive against slavery that was continued until the Civil War. The movement of fugitives and free Negroes into Michigan began as early as 1836, when a Quaker preacher brought a runaway slave into Cass County by the Underground Railway. During the 1840's, hundreds of Negroes came to Michigan, settling in Cass County, Battle Creek, Marshall, and Detroit, confident that the Abolitionists would protect them. The passage of the Fugitive Slave Law in 1850, transforming Michigan citizens into slave-catchers, made Negro liberation a white-hot political issue and a leading factor in the formation of the Republican party 'under the oaks' at Jackson in 1854.

The 'Great Migration' of Negroes to Michigan took place during the first World War and immediately afterwards, when employers in the frenzy of war-time production turned to this unused supply of labor. Recruiting agents brought in trainloads of Negroes with their families. The Negro population of Detroit, where concentration was greatest, increased from 5,741 in 1910 to 40,838 in 1920, with a further increase to 120,066 in 1930 and, according to a careful survey, to 135,000 in 1936, and 150,000 at the end of 1938. The 1930 census enumerated 169,453 Negroes in Michigan.

Hundreds of Negroes went also to Dowagiac, Flint, Saginaw, and Pontiac, where factory work was plentiful. Many overflowed into the smaller cities. White people regarded the influx of black workers with alarm and hostility. Negroes already integrated into Michigan life as small compact groups, living harmoniously with their white neighbors, were apprehensive, regarding the newcomers as potential causes of anti-Negro feeling.

Housing for Negroes has been a persistent problem. Every town and city in which Negroes live has a more or less sharply defined 'Negro

district.' At the time of the 'Great Migration,' 1917-21, houses were available only in slum areas. Hostile elements attempted physical ostracism in the smaller towns. Negroes cannot live in Owosso even as servants. In time, prosperous Negroes found improved living quarters, but they are still barred from many areas. No Negro, however wealthy, can purchase a home in Dearborn, Grosse Pointe, or Grosse Ile.

Large numbers of Negro workers are engaged in industry. As many as 11,000 have been simultaneously employed in Ford's Dearborn plant. Despite social pressure, Negroes have established themselves in Michigan's business and professional life. They have built businesses and laid the foundations for a few major industries, their enterprises ranging from the nondescript barbershop to the well-equipped hospital, summer resort, and finance corporation. Detroit has a greater per-capita volume of business controlled and patronized by Negroes than any other city in the United States; for example, a thriving insurance company and a large cleaning and dyeing plant compete successfully with similar establishments owned by whites. There are seven Negro hospitals in Detroit alone. Negro church property in Michigan has a valuation of \$5,000,000.

Numerous organizations have emerged from the Negro communities, among them the Booker T. Washington Trade Association, the Housewives' League, a producer-consumer association, and a consumer group controlled by 'Paradise Valley,' a section of Detroit's oldest Negro district. National organizations for race betterment, such as the National Association for the Advancement of Colored People, National Urban League, and the National Negro Congress, receive significant contributions from Michigan Negroes. The local work of these groups is supplemented by the churches, the Y.M.C.A. and Y.W.C.A., and various civic committees.

Negro life in Michigan is full of contradictions and contrasts. There is the misery of the typical Negro slum district, and there is also the beauty and order of residential areas inhabited by professional Negroes, such as the Conant Garden section in Detroit. There is the quiet, almost idyllic life of the prosperous Negro farmers in Cass County; and there is the flamboyant, 'swing-tempoed' night life of Detroit's Paradise Valley, where Joe Louis vaulted to fame.

Violent repercussions of race prejudice have not deadened the Michigan tradition of justice to Negroes. The Civil Rights Bill, making it illegal to refuse Negroes service in public places, was passed recently through the efforts of the Negro State senator, Charles C. Diggs, in

co-operation with his white colleagues. Negroes have won a respected place in Michigan industry. Formerly ignored in the labor movement, many are now members of unions affiliated with the CIO.

Russian immigrants are divided into several ethnic groups. The U. S. census sets Michigan's Russian-born population at 34,348, but of these only 12,605 may properly be classified as Russian. More than 1,000 heads of families in the 'Thumb' and eastern rural counties of Michigan, listed as Russians, are descendants of German colonists who went to Russia in the reign of Catherine the Great and lived there in Germanic racial islands until they migrated to America after Russia's unsuccessful 1905 revolution. Port Huron houses a well-defined colony of this stock. Similarly, many of Michigan's 28,561 Yiddish-speaking immigrants are from Russia.

The Ukrainians, also called Little Russians or Ruthenians, form one of Michigan's most interesting ethnic groups. Their homeland extends from the Carpathian Mountains and contiguous territory, across the vast steppes of southeastern Europe, which form the Ukrainian Republic of the Soviet Union. In Michigan they are concentrated in Wayne County, as workers in the automobile and allied industries. Most of them are listed in the U. S. census as Poles, since they come from Galicia. Others are classified as Russians, Rumanians, or Czechoslovaks, according to the national government now ruling their birthplace. Lacking official statistics, Ukrainians point to their organizations as evidence of numerical strength. The Detroit area supports three Ukrainian newspapers and 48 firmly knit organizations of every shade of political opinion and every variety of social and cultural purpose. The population approximates 20,000 in this area, with a scattering throughout the State.

The Ukrainians have a rich endowment of art expressed in folklore, songs, and dancing, and they seek consciously to preserve racial cultural patterns. Choral groups have been organized in Detroit to preserve Ukrainian music as a cherished heritage and a contribution to American culture.

Other expressive Slavic groups in Wayne County are the Czechoslovaks, Jugo-Slavs (South Slavs), and Bulgarians. An amazing number and variety of organizations furnish outlet for cultural, political, and social strivings. Old World political cleavages have in some instances been transplanted intact. The famous Nightingale Chorus of Detroit, for example, wishes to be known as a Croatian, rather than a Jugo-Slav institution. Typical of Slavic folk life is the intermingling

of religious and recreational activities. A holy day celebration may begin with Mass and end with a dance in the parish hall.

The Lithuanians, many of them skilled workers, have adapted themselves successfully to American customs and are widely scattered over the State. They are strongly organized in numerous societies, and, like most of the minorities that gained national independence in 1918, celebrate their 'Independence Day.'

The Hungarian colony of Delray, fronting the river within the corporate limits of Detroit, is a picturesque racial island, occupied by about 35,000 people of native or foreign-born Magyar stock. Some came directly from their Old World villages, others migrated from nearby States. The persistency of Hungarian folkways is attested by the saying, 'In Delray the village life flows on.' Equally striking is the Hungarian colony in Kalamazoo, where the poorest class of unattached workers live co-operatively in several houses.

Restaurants are an important element in the social life of racial groups. Operated by individuals, or co-operatively, as among the Lithuanians and Russians, they offer native foods: the sour milk of the Bulgarian, Kosher meats, the *schee* (cabbage soup) and *kaska* (buckwheat mush) of the Russian, the German's *Wiener Schnitzel*, the Greek's Turkish coffee and *baklavados*, Lithuanian cabbage and meatballs, and the artistic Rumanian confections.

The Near East is well represented in Michigan by Syrian grocers, fruit dealers, and peddlers. The Greek is the restaurateur. Detroit claims the largest Arabic-speaking community in America. In the midst of Detroit's immigrant 'ante room,' at the corner of St. Antoine and Lafayette, are three 'coffee shops'—Syrian, Greek, and Turkish. Numerous tongues are spoken in the vicinity—Greek, Arabic, Armenian, Bulgarian, Turkish, Hindustani, Italian, Polish, Russian, Serbian, Albanian, and Macedonian.

The Mexicans, because of geographical nearness of the homeland and their background of agricultural peonage, present a special problem. Michigan labor generally spurns the back-breaking job of sugar-beet culture, and entire families of Mexicans are brought to work the eastern Michigan fields at low wages on terms painfully akin to contract labor. At the close of the season, many become welfare charges, thereby raising the problem of deportation. By delicate co-ordination of diplomacy and welfare funds, the harsher practice is frequently mitigated to voluntary repatriation. The 1930 census listed 13,336 Mexicans, a number that varies with the ebb and rise of employment.

Michigan's cultural heritage and current trends can be understood only in relation to the diversity of its 47 per cent of foreign racial stock. The following table, based on the 1930 census, indicates the numerical strength of the larger ethnic groups:

<i>Racial Group</i>	<i>Foreign-born</i>	<i>Native-born having one or both parents foreign-born</i>	<i>Total Racial Stock</i>
Canadian (non-French)	173,777	237,314	411,091
German	81,714	283,549	365,263
Polish	119,228	201,306	320,534
English	62,721	103,127	165,848
Netherland-Dutch	32,128	74,298	106,426
Italian	43,087	54,961	98,048
French-Canadian	28,539	59,372	87,911
Russian	34,348	41,308	75,656
Finnish	27,022	47,207	74,229
Swedish	23,905	44,672	68,577
Scotch	35,257	30,733	65,990
Czecho-Slovakian	17,646	26,956	44,602
Hungarian	19,188	21,246	40,434
Austrian	13,299	21,493	34,792
Jugo-Slav	16,468	17,024	33,492
Belgian	13,921	12,887	26,818
Norwegian	7,201	15,916	23,117
Danish	7,210	13,297	20,507
Lithuanian	9,340	11,149	20,489
Rumanian	11,482	8,899	20,489

Among other racial groups are 18,085 French (in addition to the French-Canadian); 16,175 Greeks, and approximately 70,000 Jews, classified under various nationalities. Among 'all others' listed in the census, Detroit houses virtually every race and nationality, including Eskimo and Afghan.

Marine Lore

By IVAN H. WALTON

MICHIGAN is unique among the States of the Union in the intimacy of its association with the Great Lakes. Even the name comes from an Ojibway word meaning 'big water.' The lakes form a coronal that distinguishes the State geographically and provides its most distinctive scenery. They form approximately three-fourths of the boundary—2,400 miles of shore line on navigable waters, which is more than has any other of the States. Michigan borders upon all of them except Lake Ontario. They temper the climate and determine many of the land forms, the location and size of the rivers, and the location of many of the cities within the State's boundaries.

The lakes have strongly influenced Michigan's history from the time the area was occupied only by the various nations of the Algonquin Indians, through the century and a half of French occupation, the half century of British control, and the century and a quarter of American occupation. Indian legends and numerous poetic place-names found all about the region, and also the French place-names and echoes of *voyageur* canoe songs that still persist about the area, bear witness to the close association of these early peoples with the Great Lakes. Since widespread permanent settlement of the region began, early in the American era, the Great Lakes have provided Michigan and the other Lakes States and Ontario with unsurpassed commercial highways, fishing grounds, and recreational areas. This long and intimate dependence of large numbers of Michigan's citizens upon the Great Lakes has given to the literature and lore that have grown up in the State a distinctive flavor.

The golden era of sailing vessels upon the Great Lakes, the era from which came the most characteristic marine lore, was the period from the close of the Civil War through the 1880's. The industrial boom the Lakes region experienced at that time enormously increased water-

borne commerce, particularly bulk freight, a type which the sailing vessels could carry much more economically than could the side-wheel steamers. In the year following the close of the war, more than a million and a half tons of grain were sent by way of the lakes to Buffalo alone, and about 400,000 tons of lumber were shipped to Chicago, and 300,000 tons of ore, mostly to Cleveland. Fifteen years later, lumber shipments had greatly increased, grain traffic had doubled, and ore shipments had increased sevenfold.

The sailing vessels that carried this produce were built in large numbers all about the lakes, notably along the Detroit, St. Clair, and Saginaw Rivers of Michigan, and also along the western shore. Barques, barquentines, fore-'n-afters, three- and four-masted schooners, and various combination rigs, built by the hundreds, attained almost a monopoly of this bulk-freight traffic and held it for several decades, until, near the end of the century, they were driven off the lakes by the competition of the large steam freighters. During most of this period, shallow harbors and interlake channels, particularly in the St. Mary's and Detroit Rivers, limited the size of these vessels to about 600 tons. Many of them, especially the 'canallers' built to navigate the old Welland Canal, had boxlike hulls of maximum dimensions permitted by the locks, but others, with their fine lines, lofty spars, up-to-date equipment, their seaworthiness and sailing ability, were the pride of the shipbuilder's art and of the men who sailed them. Most of them were individually owned. The large ship-owning corporations had not yet appeared on the lakes. The masters chartered their vessels for individual trips with any cargoes that were at hand, and, in the late 1870's, there was sufficient commerce to support about 1,800 of these vessels.

The crews of the larger vessels usually consisted of one master, one or two mates, from eight to twelve sailors, a cook, and a 'boy.' The masters, who frequently owned their own vessels or at least a share in them, were invariably local men. They had complete charge of chartering their vessels, collecting freights, and paying their men, as well as of sailing their vessels. The mates also were usually, but not always, local men.

The 'men before the mast,' however, were, at least in the early part of the period, for the most part from 'down below'—that is, from the Atlantic. According to an old song,

In the crew were sons of other lands,
Roundheads and Scots of a feather,

Who wandered the world for a drink and a bed
In fair and stormy weather.

These water rovers were attracted to the lakes by high wages. At the end of the season of navigation, they returned to the ocean or spent the winter in waterfront sailors' boarding houses. They were a hard-living, devil-may-care lot, who spent their money freely with little or no concern for the future. Union regulations did not permit them to ship for longer than one trip at a time, so they were paid off as soon as the vessel tied up at its destination, and they stayed ashore in various waterfront haunts until an opportunity came to make another trip. In later years, more and more of the sailors were local men. Large numbers of them came from Michigan lake ports—Detroit, cities along the St. Clair River, and scores of other ports—and even from interior communities.

The trips varied in length from a few days to several weeks. The grain traffic at this time was chiefly from Chicago and Milwaukee to Buffalo, and, depending upon the build of the vessel and weather conditions, trips required from one to three weeks. The ore trade, the most of which was from Escanaba, Marquette, and Houghton to Detroit and Cleveland, required about the same length of time for individual trips. Most of the lumber was taken in short trips from Upper Michigan and Wisconsin to Chicago. Some, however, was taken the length of the lakes to the St. Lawrence, and from there sent on to the Atlantic and to Europe.

Sailing on the lakes was at that time, and still is, quite different from sailing on the ocean. Lakes navigation has always been largely a matter of dead reckoning, which is checked when possible by landmarks. The large size of the lakes, particularly the three upper ones, the irregularity of their shores, the large number of islands and shoals, and the wide diversity of weather conditions required that the officers who sailed the 'wind ships' have unusual skill both as sailors and as pilots. The lakes sailors developed an extraordinary ability, which enabled them to sail their vessels with great skill and accuracy even in darkness, fogs, and adverse weather. The extensive system of Government aids to navigation, at present found all about the lakes, had not come into being in the schooner era.

Life aboard the white-winged schooners had a particular poetical quality, conducive to the growth of what, in general terms, may be called 'lore.' The actions of a steamboat are quite predictable, but a vessel under canvas has a will of its own that must be reckoned with.

The sailing vessels had personalities that aroused intimate emotions and admiration that found expression in stories and songs and even in many of the names that were given these vessels: *Golden Fleece*, *Silver Wake*, *Morning Star*, *West Wind*, *Sea Gull*, *Our Son*, *Sea Flower*, *Wanderer*, *Water Witch*, *Forest Maid*, *Queen of the West*, *Belle Sheridan*, *Twilight*, *Sailor Boy*.

These vessels, after loading and leaving port, often did not touch shore again for one to three weeks, sometimes longer. The crew, working 'watch and watch,' under ordinary weather conditions did not have much spare time, but, when they did, it was necessary for them to provide their own amusements, and storytelling and singing were the principal means. A good sailor was supposed to be able to provide his share of entertainment. Some vessel masters would even pay extra wages to sailors who were good entertainers. The sailor-singer was ever a popular man aboard ship, as well as in the waterfront gathering places. The crews of vessels windbound in harbors along their routes, such as those behind the sand dunes along the west Michigan shore, or under the lee of an island, would at times gather aboard one of the larger vessels, and each man in turn would entertain the group, or, if unable, suffer the humiliation of the incompetent. In the waterfront saloons in the larger lake ports, it was the custom for each man in the group to sing a song, play some musical instrument, tell a story, dance a jig, provide some other entertainment, or else buy the drinks. Some men became well known all about the lakes for their ability as entertainers.

Out of this practice there grew up a body of lore that was the common property of the lakesmen. A large part of it has, of course, drifted away and become lost, but some of it has persisted in the old logs and account books, in the travel literature of the time, in the marine press, and in the memories of the few remaining old schoonermen who still make their homes in the lake ports. The extant material that has recently been recovered, particularly the many fragments, bears ample testimony of its former abundance. Michigan vessels, ports, shores, and sailors occupy a prominent place in it.

The weather lore, perhaps the least local in its associations, was, however, of real practical importance to the early lakesmen, as during most of the schooner era there were no Government weather forecasts available. The schoonermen were entirely dependent upon the wind to drive their vessels over the lakes, and frequently the safety of their lives, as well as their vessels and cargoes, depended upon their ability

to foretell weather conditions. An ocean vessel caught in a severe storm could 'heave-to and ride it out,' even though it might drift for several days. There was always plenty of sea room. Lakes vessels, however, were always within a few hours' distance of dangerous lee shores, and, if caught unawares in the open lakes away from sheltering harbors or islands, they had to fight it out as best they could. The hundreds of vessels lost on the lakes, many of whose bones are still bleaching along the shores, attest the severity of storms that frequently sweep these waters.

Under this necessity, the lake sailors imported and developed a body of observations that enabled them to foretell weather with remarkable accuracy. The change in direction of the wind; the location, nature, color, and movement of clouds in the sky at different times of the day; the color and brightness of the sun, the presence of a solar halo and of 'sun dogs' (bright spots in the sky on either side of the sun), the color of sunrise and sunset; the clearness with which vessels or other objects could be seen at long distances over the lakes; various characteristics of the moon and stars; the northern lights; appearance of meteors; the action of sea gulls, and other natural phenomena all assisted the lakesmen in forecasting weather. A few of the more common observations follow:

Rain before wind, take your topsails in,
Wind before rain, hoist 'em up again

When the wind shifts against the sun,
Watch her boys, for back she'll come.

The east wind has a bad reputation.

The higher the clouds the fairer the weather.

If the clouds seem scratched by a hen,
Better take your topsails in.

When the clouds appear like rocks and towers,
You may expect light wind and showers.

Clouds going cross wind indicate the near approach of a severe storm.

Dark clouds driving fast under lighter ones indicate squalls.

Clouds that cast shadows on the water foretell rain.

The softer the clouds the less wind.

Anvil-shaped clouds foretell a gale of wind.

Soft, undefined, feathery clouds indicate good weather.

Evening red and morning gray
Will send the sailor on his way,

But evening gray and morning red
Will bring rain down upon his head.

A bright yellow sunset indicates strong wind.

If the sun 'draws water' in the morning, it will rain before night.

A 'sun dog' in the morning
Will bark before night,
But a 'dog' in the evening
Is the sailor's delight.

Unusual clearness of distant object, or the twinkling of the stars indicate approaching storms.

A rainbow in the morning indicates bad weather, in the evening good weather.

When a sailor can hang his oilskins on the lower horn of the moon (that is, when it points upward), he'll not need them.

Sea gulls flying high and out over the land indicate a gale of wind. When they fly far to seaward, moderate winds and fair weather may be expected.

Smoke ascending steadily and high indicates clear weather, but hanging low over the water indicates bad weather.

The dependence of the schooner men upon the vagaries of weather and upon the seaworthiness of their vessels, the dangers of hidden reefs and changing channels, and other dangers beyond their control led them to take cognizance of various omens and their own 'hunches.' Some of the lakesmen's superstitions were evidently imported from salt water, but others no doubt were of local origin. The old superstition against beginning a season on Friday was, of course, current about the lakes, and many sailors would not even begin a trip on this day. A number of prominent Lakes shipbuilders carefully avoided laying down keels on Friday; and many are the stories of vessels that sailed on this fateful day and came to grief. Another old belief, that rats leaving a vessel foretold disaster, was widespread among lake sailors, and many cases are on record in which whole crews deserted vessels when the news was spread that rats had been seen departing from them. A once-popular lakes pumping chantey contains the stanza,

The rats have left her one by one,
They tightroped to the shore,
And if we stay long on this old tub
We'll see our friends no more.

Some of the lake schooners had the misfortune to acquire the reputation of being 'unlucky,' and sailors were quite reluctant to ship aboard them. Such was the case of the Detroit schooner *Walter H. Oads*, which actually did have a number of mishaps and eventually collided with another vessel and sank in Lake Erie. The schooner

Augusta, which collided with and sank the passenger steamer *Lady Elgin* on Lake Michigan, had a similar reputation and, because of it, was finally sold and sent to the Atlantic.

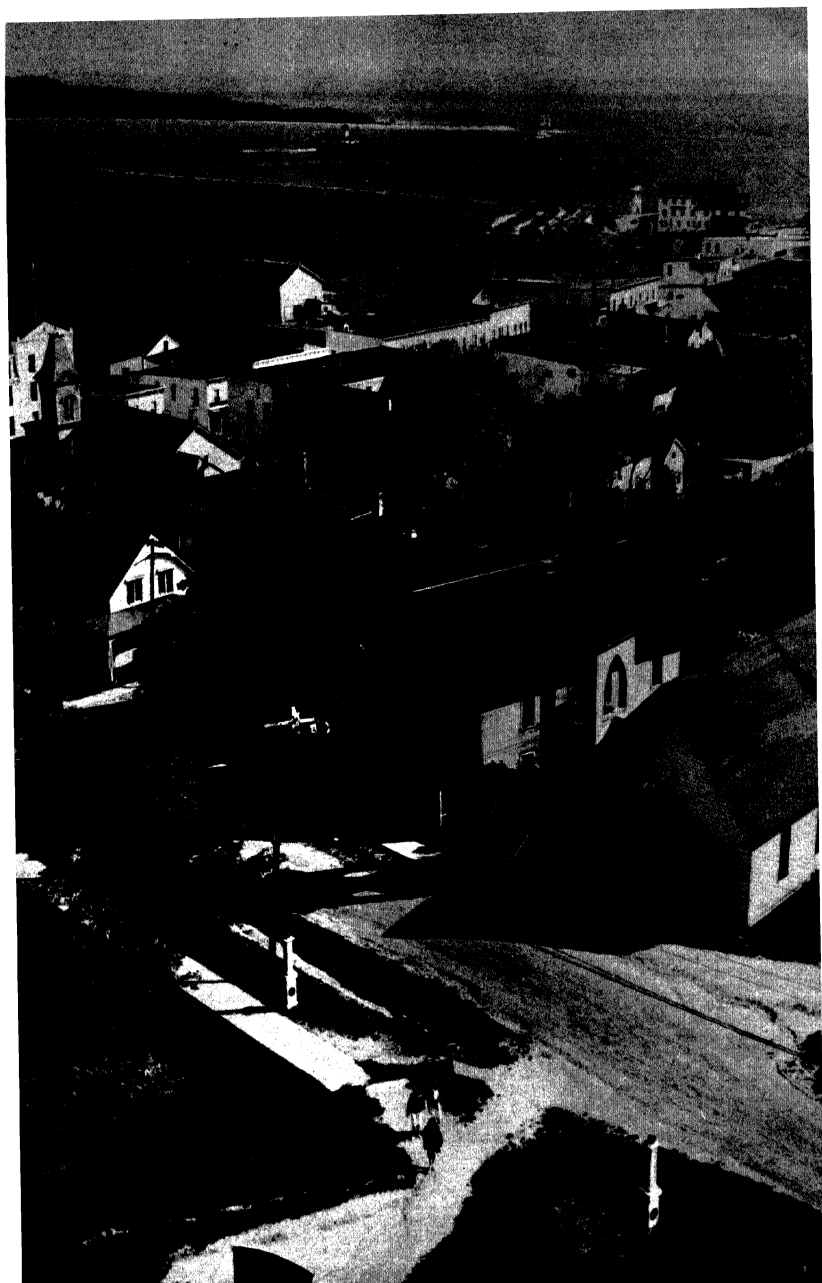
A number of other signs foretold possible danger to the lakesmen. Should it be known that a vessel had any mishaps while being built, or that she stuck on the ways while being launched, sailors often kept clear of her. A hatch cover found up-side-down aboard a vessel, or a shattered compass glass meant misfortune. Some men would not ship aboard a vessel that had a woman cook, a cross-eyed sailor, or a cat aboard, or on a vessel that had had her name changed, or one that was named in honor of some person who had since died. A slight list to port after a vessel was loaded was also a bad sign. Whistling aboard vessels was sure to bring headwinds and many officers would not permit it. During calms, however, whistling might bring a wind. Some ship-builders, who wished to insure a profitable career for their vessels, would insist on placing a coin under the step of the mainmast, and similarly some vessel masters, to insure a profitable trip, would toss a small coin over the stern of the vessel as she left the loading dock. Even at the present time, some yachtsmen in the Mackinac races use this means of obtaining any advantage that may be so obtained.

The type of story generally known as a 'yarn' evidently reached a high development among the sailors. Most yarns in the early period seemed to have been imported from the ocean. However, they later came to be concerned with experiences and objects about the lakes. The distinguishing quality of a yarn is that it is usually a narrative of impossible events, told with seeming seriousness to deceive the newcomer, or as the sailors say 'greenhorn,' and at the same time to provide entertainment for those who are *in* on the story. On the Lakes vessels, the 'boy' was frequently the butt of these stories. He was an apprentice seaman, and whether he was young, or possibly older than the other members of the crew, he was still the 'boy,' and as such a victim of stories and pranks of the initiated. Among the surviving stories told for the delectation of the 'boy' are some dealing with quite unusual circumstances. The tower of the Ford Gratiot Light at Port Huron, for example, was pointed out to scores of apprentices as marking the place where George Washington was scalped by the Indians and buried. Saginaw Bay was the haunt of the particularly ferocious tigerfish, which, at times, would attack passing vessels and do great harm if not appeased by a good dinner—and, of course, like their jungle namesake, they preferred tender 'boys' to toughened sailors. Lake

Huron also was the home of pugnacious whales. The 'boy' must be on the constant lookout when a vessel was in their vicinity to 'sing out,' should there be danger of colliding with one—that is, with one of a hundred-foot length or more, as small ones didn't matter. The islands of northern Lake Huron were inhabited by tribes of fierce Indians, who frequently would sally out in their canoes and capture passing vessels, torture the crews, and make off with the cargo. Narratives of torture and a few escapes were told with gusto. The 'boy' must also keep a close lookout for the approach of the Indian canoes. In northern Lake Michigan, the Mormon pirates who lived on Beaver Island not infrequently lured vessels to their destruction at night by false lights and, likewise, made away with the crew and cargo. Distant Lake Superior was the home of some great sea serpents, which, at long intervals, would come to the surface when a vessel was passing and pick off any convenient member of the crew. The 'boy' lookout in this territory must ever be on his guard.

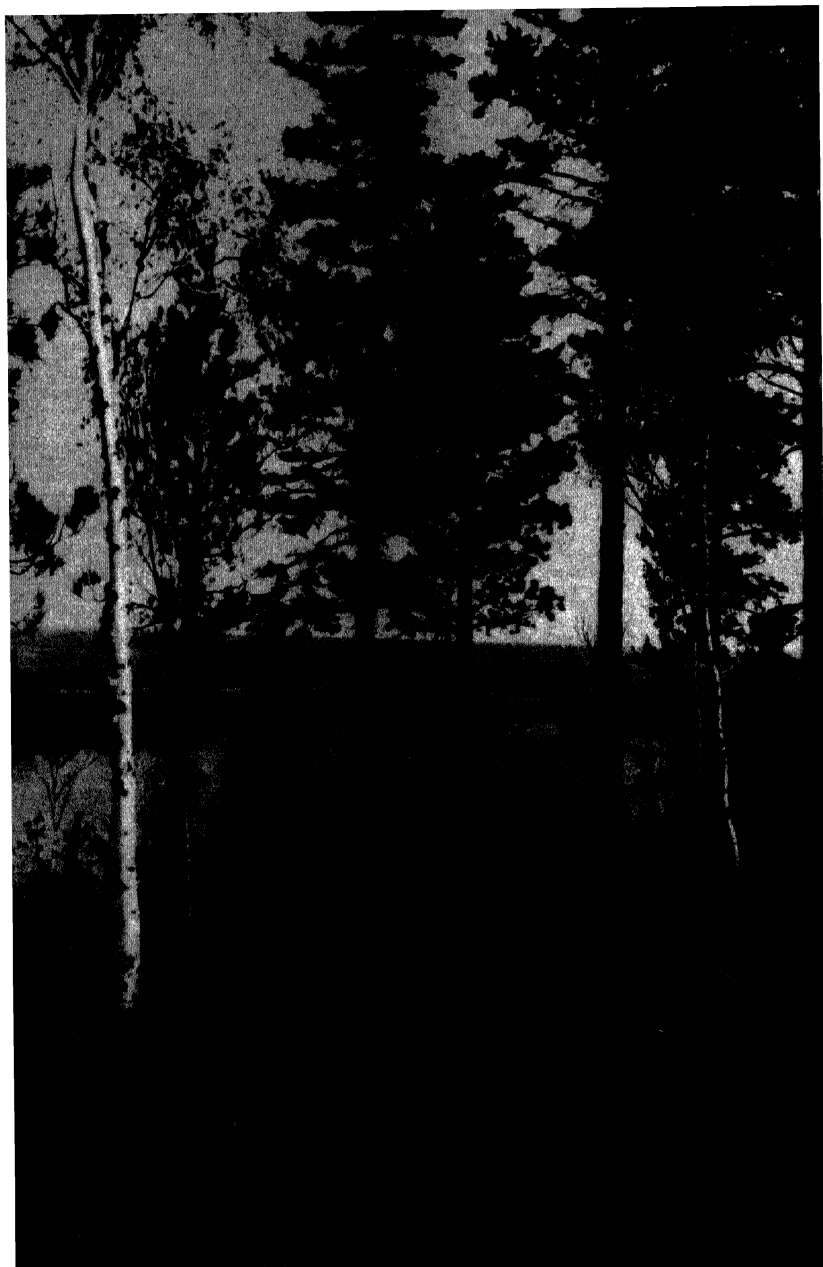
The great woodsman Paul Bunyan did not confine all his feats to the lumber woods. Lumbermen who sailed on Lakes vessels during the summer season and worked in the woods during the winter were probably responsible for preserving a record of some of Paul's accomplishments on the lakes. It became common knowledge that the very existence of the lakes was owing to the need Paul had for ponds for his great sawmills. The dirt and rocks that he dug out to form the lakes, he shoveled over into the Dakotas, so as not to cover the forest regions just west of the lakes, and so formed the Black Hills and some of the Rockies. The water for the lakes he brought in from the ocean through a ditch he dug, which later became known as the St. Lawrence River. This ditch was first dug so that the flow was toward the lakes. The salt was taken out of the ocean waters at great filtration plants that Paul established along the St. Clair River. This accounts for the presence of salt beds in this region. After the lakes were filled, he redredged the St. Lawrence and reversed the flow. He also put in a rock barrier at Niagara to maintain the level of the lakes above this point. Paul at times rafted his logs down the lakes, and on no puny scale. He used a line some 20 feet in diameter and towed rafts of many million logs behind his canoe; and woe to the unfortunate vessel that ventured too near and got drawn into his wake. The irregular high and low water levels of the lakes, which have always been a serious concern of the lake sailors, were begun by Paul's famous blue ox. He drank only at several-year intervals, but, when he did quench his thirst, he would

The Great Lakes: I



Photograph by Wilson; courtesy of Work Projects Administration

MACKINAC ISLAND



Photograph by courtesy of Michigan Department of Conservation
LAKE SUPERIOR SHORE, KEWEENAW COUNTY

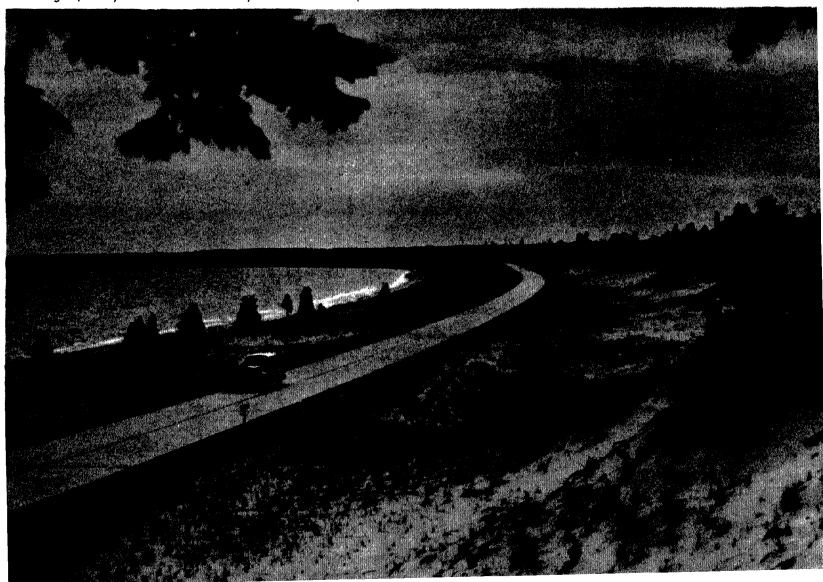


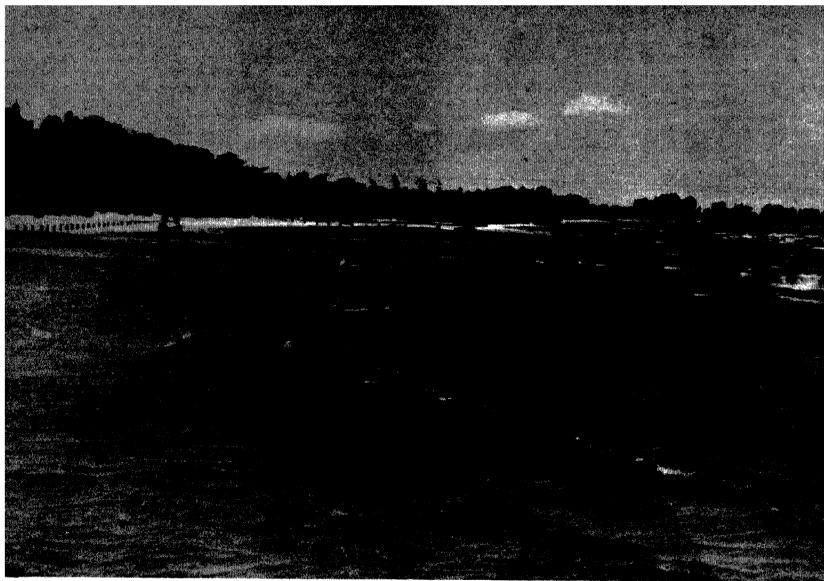
Photograph by courtesy of Detroit News

SKIING ON SAND DUNES

US 2 ALONG LAKE MICHIGAN'S SHORE

Photograph by Wilson; courtesy of Work Projects Administration



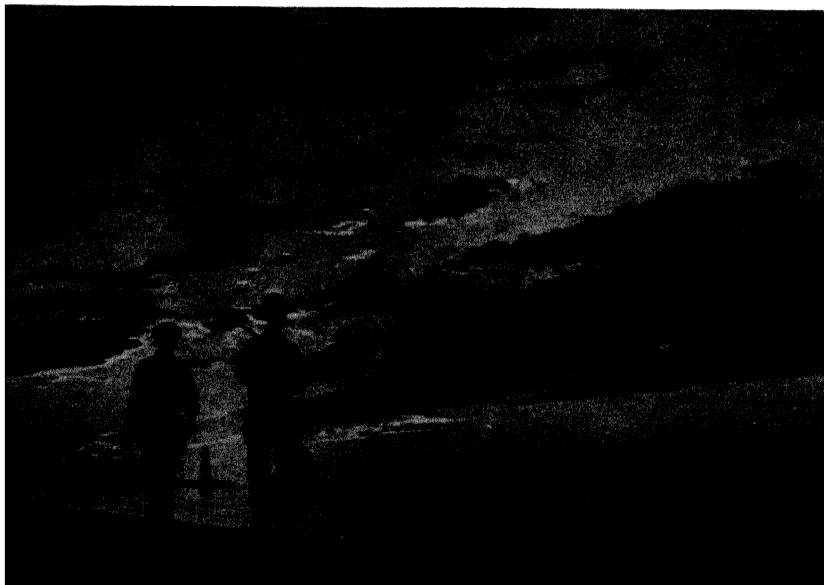


Photograph by Wilson; courtesy of Work Projects Administration

PARALEAON BEACH ON LAKE HURON, NEAR BAY CITY

SUNSET ON LAKE MICHIGAN—A BENTON HARBOR SCENE

Photograph by Wilson; courtesy of Work Projects Administration





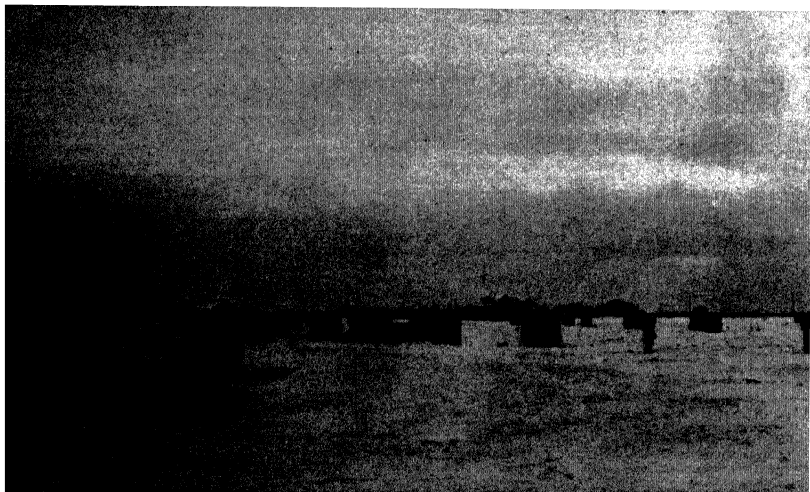
Photograph by Carl McDow; courtesy of Black Star

SAILING ON LAKE ST. CLAIR

YACHT BASIN, BELLE ISLE, IN THE DETROIT RIVER

Photograph by courtesy of Detroit News

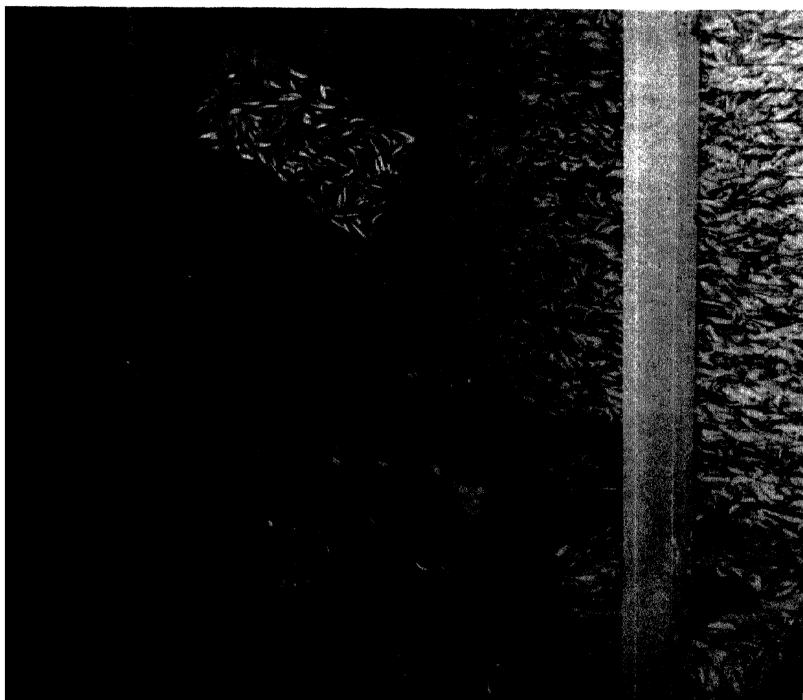




Photograph by courtesy of Michigan Department of Conservation
ICE FISHERMEN'S QUARTERS ON LAKE ST. CLAIR

SLABS OF FROZEN SMELTS

Photograph by courtesy of Escanaba Chamber of Commerce



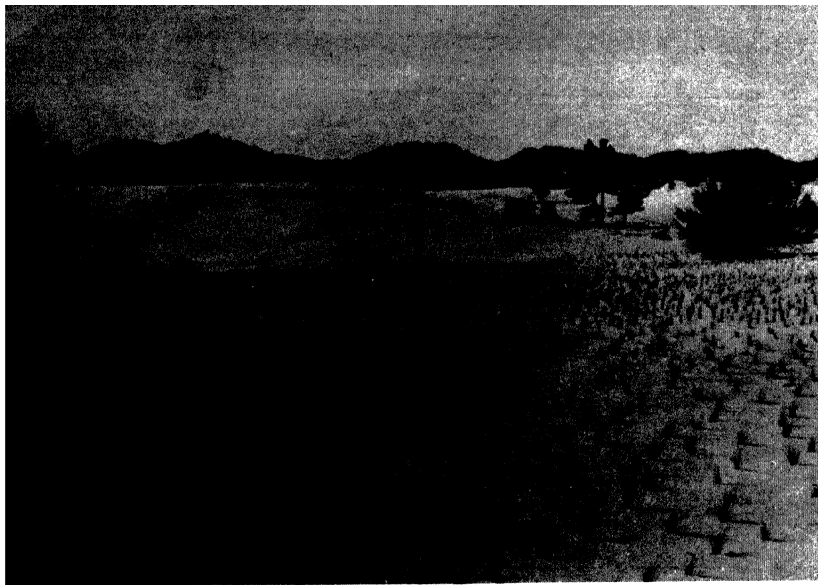


SMELT DIPPING, MENOMINEE

Photograph by courtesy of Michigan Department of Conservation

MENDING NETS





Photograph by courtesy of U. S. Forest Service

CHECKING A TRAVELING DUNE

Beach grass has been planted by the WPA in an effort to control this sand blow near Grand Haven, which has covered a fertile farm to a depth of thirty feet.

JUNIPER ORCHARD

Photograph by courtesy Michigan Department of Conservation



lower the lakes to such an extent that several years' rainfall was required to bring them back to normal. This periodic drinking began the long-time variation in lake levels that still persists.

Narratives of great feats of navigation upon the lakes were quite common. Some of the older sailors in their younger days had been on vessels that sailed from Buffalo to Chicago, or over other difficult routes, through a dense fog without ever a mishap; and, when the fog arose, they had found themselves anchored within a boat's length of their destination. Others, who carried too much sail under similar conditions, found, when the atmosphere cleared, that they were navigating out on the fog and thus lost their vessels far inland. Great storms at times arose that blew vessels out of one lake, through the air, and into another, particularly from Lake Superior over into northern Lake Michigan or Huron.

Tales of mysterious disappearances were numerous. Many vessels sailed out of port under normal conditions and disappeared, leaving no trace of the fate that overcame them. A long list of these includes both sail and steam vessels and extends from the early mysterious disappearance of La Salle's *Griffon* to the loss of the freighter *Bannockburn* in 1902, the car ferry *Pere Marquette* 18 of Ludington in 1910, and the Canadian *Quedoc* off Isle Royale in 1927. There was plenty of precedent in actual occurrences for such stories, but in the telling the stories took on an ominous character for the benefit of the green-horns.

Legends, or stories that were actually believed by those who told them, also existed among the lakesmen. Those that are still extant have their origin undoubtedly in quite plausible events. For example, the lakes have had several 'Flying Dutchmen' or ghost-ship stories that quite probably grew out of mirages that are not uncommon on the lakes. The writer has been told on a number of occasions of vessels being sighted on distant horizons, sailing along through the air above the water. At times, sand dunes, forested headlands, and other shore features have been seen drifting along above the lakes. It is not surprising that such appearances should be considered the visitations of ghost ships, or is much imagination required for men prone to accept the supernatural to see in these appearances the likenesses of vessels that had been overcome by disasters. The hazy outline of La Salle's *Griffon*, which disappeared mysteriously in northern Lake Michigan in 1679, has been sighted skirting the southern shore of the Upper Peninsula. Similarly, on southern Lake Michigan, the passenger steamer

Lady Elgin, which was lost in 1860 with nearly 300 lives, has appeared steaming along on distant horizons in that vicinity. Even recently, the freighter *Bannockburn*, which almost 40 years ago mysteriously disappeared with all hands on Lake Superior, has been seen on late summer days steaming along off Keweenaw Point.

Out of the fact that few bodies of sailors lost on Lake Superior have ever been recovered has probably grown the legend that on the bottom of this lake are great rocky caverns, into which bodies are carried and imprisoned by lake currents and there preserved by the ice-cold water. This brief legend seems to be a beginning of a Lakes version of the salt-water 'Davy Jones' Locker,' or 'Fiddlers' Green.'

The numerous disasters on the lakes also gave rise to many stories of sunken treasure. Fortunes in gold coin, rich cargoes of copper and iron ingots, oak and walnut timbers, whiskey, and other materials are said to be scattered rather profusely about the lakes, many in Michigan waters. Just below the mouth of the Detroit River in Lake Erie rests the steamer *Clarion* with a cargo of locomotives, and not far distant in the same lake lies the schooner *Lexington* of Algonac, lost in 1846 with a large cargo of whiskey. Off Point Pelee in western Lake Erie, the schooner *New Brunswick*, lost in 1859, is reported to be lying in moderately shallow water with a valuable cargo of walnut and oak timbers, worth at present between a quarter-and a half-million dollars. Dredging operations near the St. Clair flats have brought to the surface some casks of whiskey and meat still intact, and this fact has given rise to speculation concerning the extent of the amount and value of the cargoes still in this vicinity. Lakesmen maintain that the coldness and purity of the water of the Great Lakes would preserve the oaken kegs and their contents indefinitely. On the bottom of Saginaw Bay rests the schooner *Fay*, with \$200,000 worth of steel billets in her hold, and also the steamer *City of Detroit*, with \$50,000 worth of copper. Somewhere near the Straits of Mackinac lies the steamer *Westmoreland*, which is reported to have \$100,000 in her safe as well as a rich cargo in her hold. The largest prize in Michigan waters is said to be in the safe of a vessel lying near Poverty Island off Big Bay de Noc, not far from Escanaba. The identity of the vessel has not been made known, but there is no secret regarding the four and a half million dollars' worth of gold bullion in her safe. The steamer *Templeton* is said to be lying on the bottom of Lake Michigan off South Manitou Island, with a cargo of 350 barrels of whiskey. In deep water off Whitefish Point in the eastern end of Lake Superior, frequently

styled 'the graveyard of Lake Superior,' are said to rest many rich cargoes of iron ore. In 1865, the steamer *Pewabic* of Detroit was lost in a collision off Alpena in Lake Huron with 30 lives and a reported cargo of 300 tons of pure copper and pig iron valued at \$200,000, in addition to a large amount of money in her safe. The value of this lost treasure increased notably, as the 32 years passed before a salvaging expedition located her six miles off Thunder Bay in 20 fathoms (120 feet) of water on an even keel. About \$7,000 worth of copper was recovered, but little more. Elsewhere on the lake bottoms, particularly along the immigrant routes, are valuable treasures whose specific locations are known only to certain individuals.

The outstanding types of lore that developed out of sailing the Great Lakes are the chanteys and amusement songs. The first chanteys used by the lake sailors were undoubtedly brought here from the oceans, but, as more and more sailors came from lake ports, some of these songs attained a local flavor. The chantey differs from other songs in that the rhythm is of much more importance than the words. They were used to assist a group of men to work in unison on a capstan, windlass, or a line where united effort was necessary. Usually some individual known as a chanteyman would 'line out' with a verse—that is, he would sing half of a couplet—and then the whole group would join in on the chorus, usually of two pronounced beats that would provide for two good pulls or whatever type of effort was required. The chanteyman would continue with the second half of the couplet while the men rested, and they in turn would follow with another chorus accompanied by two more pulls. This procedure would be continued until the work at hand was completed. A good pronounced rhythm was all-important; the words might be about anything—the ship's officers, the cook, the food, incidents on the trip, or events ashore. A good chanteyman could make up verses as long as the work at hand required. The following halyard chantey was patterned on a salt-water model:

In a handy three-master, I once took a trip—
Hurrah boys, heave 'er down!
And I thought that I was aboard a good ship—
Way down, laddies, down!

But when out at sea to my sorrow I found—
Hurrah boys, heave 'er down!
That she was a workhouse and that I was bound—
Way down, laddies, down!

We left with a fair wind, a mere little breeze—
Hurrah boys, heave 'er down!

But somehow the old man was not at his ease—
Way down, laddies, down!

We looked at the sky, and he said, 'Mr. Brown—'
Hurrah boys, heave 'er down!
'Just clew up those tops'ls and then reef her down—'
Way down, laddies, down!

We reefed and we furl'd from dark to daylight—
Hurrah boys, heave 'er down!
You never in your life did see such a sight—
Way down, laddies, down!

The mate was a shellback from way down below—
Hurrah boys, heave 'er down!
He'd rave and he'd roar as he walked to and fro—
Way down, laddies, down!

The galley was dirty, the cooking was bad—
Hurrah boys, heave 'er down!
Fresh meat was a thing that we never had—
Way down, laddies, down!

And now we are bound down the Lakes, let 'em roar!—
Hurrah boys, heave 'er down!
And on this old wagon we'll ship nevermore—
Way down, laddies, down!

Another, a windlass chantey, begins,

Come gather 'round boys, now all hands—
Heave 'er up, lads, heave 'er high!
Strain and heave 'er, all who can—
Heave 'er up and bust 'er!

Oh, we'll say farewell to this old town—
Heave 'er up, lads, heave 'er high!
We'll ship once more, we're outward bound—
Heave 'er up and bust 'er!

When we get out and can let go—
Heave 'er up, lads, heave 'er high!
We'll point 'er nose from Buffalo (Chicago, etc.)—
Heave 'er up and bust 'er!

Farewell sweet Liz, and Mag, and May—
Heave 'er up, lads, heave 'er high!
We leave with you our last trip's pay—
Heave 'er up and bust 'er!

And another, a remade ocean forecastle song, provided a steady rhythm for a group of men working a capstan:

When the mate calls up all hands
To man the capstan, walk 'er 'round!
We'll heave 'er up, lads, with a will,
For we are homeward bound!

Rolling home, rolling home,
Rolling home across the sea;
Rolling home to old Chicago,
Rolling home, old town, to thee.

Then it tells of beating the length of Lake Erie, and continues:

Up the river on a towline,
Passed the city of Detrite,
The cinders fall upon the deck
All day and half the night.

When up the length of old St. Clair,
And at Port Huron we let go;
We'll hoist the canvas on the forestick,
On the main and mizzen too.

It then mentions their going through the Straits and Lake Michigan, and ends thus:

Soon, my friends, our trip is over,
And I got no more to say;
We'll go to Old Black Pete's, my lads,
And spend our whole trip's pay!

Chanteys that were popular on the ocean at the time were also used on the Lakes vessels. Among them were 'Shenandoah,' 'Sally Brown,' 'Reuben Ranzo,' 'Patty Doyle's Boots,' 'The Rio Grande,' 'The Lowlands,' 'Santa Ana,' 'Roll the Cotton Down,' and numerous others.

Old lakesmen tell of a custom that was not unusual, of sailors using the chanteys while in waterfront saloons, where the heaving was done on glasses instead of on lines.

Old residents of the waterfront along Port Huron still tell of hearing the sailors aboard tows of schooners approaching Lake Huron chanting lustily during the daytime or night, as they made sail preparatory to dropping the tug as they entered Lake Huron. Similar accounts come from Mackinac Island. The crews of schooners windbound under the lee of the island would at times awaken the villagers in the dead of night with their chanteys, as they heaved in their anchors or made sail before continuing their trip. Still other accounts come from a number of the dune-locked harbors along the west Michigan shore, where vessels frequently put in to wait out severe storms.

Chanteying practically disappeared from the lakes in the late eighties with the advent of the donkey engine, which did most of the heaving formerly done by men, and it ended completely in the last years of the schooner era, when the largest of these vessels were converted into barges and towed behind steamboats.

Amusement songs are quite different in character, and many more of them survived. They were used to while away leisure hours in fore-castles and in gathering places ashore. Land songs popular at the time were used, also ocean songs such as 'The Bold Princess Royal,' 'The

Stately Southerner,' 'The Flying Cloud,' 'The Dreadnaught,' and many that the lakesmen made up about their own experiences. The latter, usually set to known airs, were concerned with storms and disasters, ore, lumber, and grain trades; life aboard ship; races; and other subjects.

Disasters on the lakes were all too common. There are probably no equal areas of commercial waterways that, if drained, would reveal as many lost vessels as would the Great Lakes. The severe weather, particularly in the autumn, the large number of vessels, the natural daring of the men spurred on by the high wages, and the lack of aids to navigation—all tended to swell the list of disasters. It is to be expected that many of these losses of vessels and their crews would be commemorated in songs.

A song, popular among lakesmen for many years, told of the Oswego schooner, *Persia*, which was lost with all hands off the Michigan shore of Lake Huron in the autumn of 1869. It tells how

They left Chicago on their lee;
 Their songs they did resound;
 Their hearts were full of joy and glee
 For homeward they were bound.
 They little thought the sword of death
 Would meet them on their way,
 And they so full of joy and glee
 Would in Lake Huron lay.
 In mystery their doom is sealed;
 They did collide some say;
 But that is all will be revealed
 Until the Judgment Day . . .

And ends:

Around Presque Isle the sea gulls scream,
 Their dismal notes prolong,
 They're chanting forth a requiem,
 A saddened funeral song.
 They skim along the waters blue
 And then aloft they soar
 In memory of the *Persia's* crew
 Lost off Lake Huron's shore!

Another commemorates the loss of the schooner *Antelope*. Bound down Lake Michigan from Chicago with a late autumn cargo of grain, she was caught in a storm and wrecked on the Michigan shore. The song states that

On the eighteenth in the morning—
 And what I saw is true—
 The ice upon our riggin' froze,
 And the cold winds fiercely blew.

But no one thought that in two short hours
 That very afternoon
 Some would be froze and some be drowned—
 The *Antelope* was doomed!

The cold increased, the tempest raged,
 The huge seas loud did roar,
 With our canvas gone, both anchors out,
 We were drifting toward the shore! . . .

We drifted with each pounding sea,
 And then we struck stern on;
 Our mainm'st by the deck was broke,
 Our mizzenm'st was gone!
 The huge seas raked her fore and aft,
 And then she swung broadside,
 And three men overboard were swept
 Into that raging tide!

Our captain tried to swim ashore,
 Our precious lives to save,
 But by his bold endeavor
 He was lost beneath the waves.
 And only one of that gallant crew
 Was in life once more to stand:
 And for miles and miles the *Antelope*
 Lined the shores of Michigan.

The loss of the steamer *W. H. Gilcher*, which disappeared with all hands off South Manitou Island in a severe night storm late in the season of 1892, is commemorated in a song:

On October twenty-eight,
 Oh, how the wind did scream!
 The last time the *Gilcher*
 And crew was ever seen.

Of death these jolly lads
 Never once did dream
 As routed for Milwaukee
 They from Port Huron steamed.

It was a fearful night,
 The *Gilcher* should turned-to,
 But she held to her course
 'Till off the Manitous.

Says a sailor's hurried note
 That later came to light,
 They were breasting mounta'n'us seas
 At nine o'clock that night.

Lost in Lake Michigan
 They did not reach the shore,
 The gallant ship and crew
 Will sail the Lakes no more!

Many other disasters in Michigan waters also have memorials in sailor songs. Such is the case with the steamer *City of Alpena*, built in

New Port (Marine City) and lost off Holland in the 'Alpena Blow,' during the night of October 17, 1880, with a captain and crew of 22, mostly from Grand Haven, and 35 passengers; the steamer *Chicora*, built in Detroit in 1892 and lost off South Haven, January 21, 1895, with 26 lives; the schooner *City of Green Bay*, which had been across the Atlantic to England and to South America, also lost off South Haven with all hands and a cargo of iron ore from Escanaba; the Canadian-built steamer *Lady Elgin*, lost in a collision on southern Lake Michigan with 287 lives, on the night of September 8, 1860; the Oswego schooner *Gilbert Mollison*, lost off North Manitou Island on October 27, 1873, with all hands and a cargo of corn from Chicago; the schooner *Oriole*, lost with all hands and a cargo of ore off the Pictured Rocks on Lake Superior, in a collision in a fog with the steamer *Illinois*; and the Port Huron schooner *William Shupe*, which foundered in a gale off Port Huron in 1894, with a loss of several lives.

Most of the amusement songs are of less serious character. A song popular aboard the vessels in the ore trade was one entitled 'The Red Iron Ore.' It narrates the course of the schooner *E. C. Roberts* from Chicago to Escanaba to load iron ore, and continues:

Next morning we hove in 'longside the *Exile*,
And the *Roberts* made fast to an iron ore pile.
They let down their chutes, and like thunder did roar
As they emptied their pockets of red iron ore.

Derry down, down, down, derry down.

Some sailors got shovels and others got spades,
And more got wheelbarrows—every man to his trade.
We looked like red devils; our fingers got sore;
And we cursed *Escanaba* and her damned iron ore.

The tug *Escanaba* she towed out the *Minch*;
The *Roberts* they thought they had left in a pinch;
And as they towed by us they bid us goodbye,
Saying, 'We'll meet you in Cleveland next Fourth of July!'

We sailed out alone, through the passage steered we,
Past the Foxes, the Beavers, and Skilagalee,
We soon passed the *Minch* for to show her the way,
And she ne'er hove in sight till off Thunder Bay.

This packet rolled on across Saginaw Bay,
And over her bow there splashed the white spray;
And bound for the Rivers the *Roberts* did go,
Where the tug *Kate Williams* she took us in tow.

Down through to Lake Erie—Oh, Lord, how it blew!
And all round the Dummy a large fleet came to.
The night dark and stormy, Old Nick it would scare,
We hove up next morning, and for Cleveland did steer.

Now we're in Cleveland, made fast stem and stern,
 And over the bottle we'll spin a good yarn,
 I think Captain Rumage had ought to stand treat
 For getting Cleveland ahead of the fleet. . . .

Another version of this song has in it the stanza:

Oh, we're bound down from Marquette, my two hands are sore;
 I've been pushing a wheelbarrow, and I'll do it no more.
 I'm humpbacked from shoveling, so listen to my roar:
 When we get to Cleveland, I'll shake red iron ore.

Out of the traffic in copper ore from Houghton to Detroit came the song 'The Old Mont Line.' It narrates the trip of a tow of Detroit barges, the *Montmorency*, the *Montcalm*, the *Montpelier*, the *Monticello*, and the *Republic*, behind the tug *Niagara* from Detroit to Houghton for ore:

There's one 'Mont,' two 'Monts,' four 'Monts' in a row,
 And you come to the old *Republic*, the end of the rotten tow.

Oh, maybe you don't believe me, lads,
 And maybe you think I lie;
 But ship in this starvation tow
 And you'll see the same as I!

They ascend the St. Clair River and Lake Huron to the St. Mary's:

We crawled up the St. Mary's and finally reached the Lock,
 And then upon Superior, our tubs began to rock.

And when we got to Houghton, near nine o'clock one night,
 The men put up a hell of a kick and damn near had a fight,

'Twas all about our shoveling dirt, we wanted some extra pay,
 The Old Man said, 'You can go to Hell, I'll pay you off today!'

We spent our dough at all the bars and then in port there came
 Another vessel from below, and we shipped right out again.

Another, a Negro work song used aboard Captain E. B. Ward's fleet of vessels that carried copper pigs from Houghton to Detroit, consists of an unending number of couplets, which relate troubles of the Negro deckhands as they spent long hours trucking the heavy copper ingots aboard. The rhythm of these couplets, and the group chorus that followed each, lightened the work of these deckhands:

De Capt'n's in de pilot house a'ringin' de bell,
 An' de mate's down a'tween decks givin' de niggahs hell!

Cho: Who's on de way, boys,
 Who's on de way?

Oh, ah'd rather be dead, an' a'lyin' on de san',
 Than make another trip on de Ole Black Sam!

Her smokestack's black and her whistle's brown;
An' ah wish de Lord ah'd a stayed in town!

It's wo'k all night an' wo'k all day,
An' all we get am not half pay!

Dey's tons o' coppah down in dat hol'
Step along dah, niggah, damn yo' soul!

Yo' belly am empty, yo' throat am dry;
Step along dah, niggah, 'fo' yo' die!

De *Ward's* boun' up, de *Moran's* boun' down,
An' de *John M. Nichol* am ha'd agroun'!

An' de *Wm. H. Stevens* a'lyin' roun' de ben'!
An' all she's a'doin' is a'killin' good men!

The best-known song that came out of the lumber trade on the lakes is the well-known 'Timber-Drover Bigler.' 'Timber-drover,' a term evidently corrupted from 'timber-drogher,' was a name applied to a sailing vessel that carried squared timbers from the upper Lakes lumber ports to the St. Lawrence, to be rafted down the river for transhipment to Europe. Timber-drovers had large ports in their sterns that could be opened to receive the timbers, and they also carried one or two horses or mules forward on the forecastle deck, to haul timber aboard and to tow the vessels through the Welland Canal. The schooner *Bigler*, which was evidently carrying a cargo of grain on the trip narrated in the song, was a blunt-nosed, clumsy canaler that was slow and hard to steer. These characteristics account for the humorous vein in the song. The 'juberju' mentioned in the chorus has been variously described as the jib boom, the raffee yard, and the crosstree, upon which the sailors at times climbed to ride the halyards down to the deck when hoisting sail. The song follows:

Come sit you down beside me and I'll sing a little song,
I know that it will please you, and it won't detain you long.
In Milwaukee in October by chance I got a site
In the timber-drover *Bigler* belongin' in Detrite.

Watch her, catch her, jump up on her juberju,
Give her the sheet and let her go, the boys will put her through!
You ought to seen us howling, the wind a'blowin' free,
On our passage down to Buffalo from Milwaukee.

'Twas on a Monday morning, about the hour of ten,
The *Robert Emmet* towed us out into Lake Michigan.
We set sail where she left us in the middle of the fleet;
The wind being from the south'rd, we had to give her sheet.

The wind veered round to sou'-sou'west and blew both fresh and strong,
And through the waters of Lake Michigan the *Bigler* she rolled on;
And far beyond her foaming bow the dashing waves did fling;
With every inch of canvas set, her course was wing-and-wing.

The wind it hauled ahead, my boys, as we reached the Manitous—
Two dollars and a half a day just suited the Bigler's crew—
From there until the Beavers, we steered her full and by;
We kept her on the wind, my boys, as close as she would lie.

We made Skilagalee and Wabbleshanks, the entrance to the Straits;
And might have passed the whole fleet there if they'd hove-to and wait,
But we drove them all before us the nicest you ever saw
Clear out into Lake Huron through the Straits of Mackinac.

First Forty-Mile Point and Presque Isle Light, and then we boomed away,
The wind being fresh and fair, for the Isle of Thunder Bay.
The wind it shifted to a close haul, all on her sta'b'rd tack,
With a good lookout ahead we made for Point Aux Barques.

We made the light and kept in sight of Michigan's east shore,
A'booming for the river as we'd often done before
And when abreast Port Huron Light, our small anchor we let go;
The tug *Kate Moffet* came along and took the *Bigler* in tow.

The *Moffet* took six schooners in tow, and all of us fore-and-aft,
She took us down to Lake St. Clair and stuck us on the Flats,
She parted the *Hunter's* towline in trying to give relief,
And stem to stern went the *Bigler* smash in to the *Mapleleaf*.

Then she towed us through and left us outside the river light,
Lake Erie for us to wander and the blustering winds to fight,
The wind was from the sou'west, and we paddled our own canoe;
Her jib boom pointed the Dummy, she's hell-bent for Buffalo.

They finally get to Buffalo and, at once, lay for a 'social glass.'

A fragment of another song dealing with the timber-droghers tells of the difficulties a Canadian vessel encountered in attempting to load in Cheboygan on Independence Day:

On July Fourth in Cheboygan Port
I tell you there was fun
The sailors kicked and would not work
Aboard the *Stewart H. Dunn*.

Did they work? No, they did not!
They went out on a bum;
And all that day the timber lay
'Longside the *Stewart H. Dunn*.

A number of songs that grew out of episodes aboard French wood and sand scows on the Detroit River and Lake St. Clair were also current. Among these were the 'Look-n-See,' the 'Let 'er Fly,' and the 'Scow Nettie Fly.' The latter begins:

O sailors, come gather and list to my ditty,
To picture aright this hero I'll try.
He seldom was sober and more is the pity,
Was Captain Poulan of the scow *Nettie Fly*.

She sailed from Chene Street, the wind blew a gale,
And down Detroit River the *Nettie Fly* flew.
Said the captain, 'I think she can carry her sail,'
Took a pull at his bottle and sized up his crew.

But all he could see was his mate, the brave fellow
 Who stood by the mainmast with bottle in hand.
 His legs they were shaky, his face it was mellow,
 As he thought of the boodle he would make on the sand.

It then tells of the difficulties the scow and her incapacitated crew experienced, while sailing the perilous waters of the Detroit River.

The French dialect song 'The Wreck of the Wood Scow Julie Plante' was sung widely about the lakes. The song is usually attributed to the Canadian poet, Dr. Drummond. There is, however, evidence that it was sung by Frenchmen on the Detroit River before Dr. Drummond's day. The lakesmen located the episode on 'Lak' San Clair' instead of on 'Lac San Pierre.' It begins:

On wan dark night on Lak' San Clair,
 De win' she blow, blow, blow,
 An' de crew of de wood scow *Julie Plante*
 Got scair an' run below,
 For de win' she blow lak' hurricane,
 Bimeby she blow some more,
 An' de scow bus' up on Lak' San Clair,
 Ten acre from de shore.

It then humorously relates the tragedy that overcame 'de capitan' and his cook, Rosie, aboard their scow on small Lake St. Clair.

Another group of songs describes other episodes about the lakes. One gives an account of the trip aboard the barge *Oliver Cromwell* behind the steam barge *Lowell*, from Port Huron to Saginaw Bay for lumber and return. It begins:

It was the eighth of May as from Port Huron we set sail;
 The wind blew from the north'rd a sweet and pleasant gale
 The *Lowell* was our puller, a staunch and noble craft,
 She was followed by the *Cromwell* with three men before the mast.

Cho. Oh, the *Cromwell* she's a goer,
 You can bet your gold on that;
 She leads them upon the wind,
 And she's hell upon the tack!
 With Stone aft at the wheel,
 His eyes on Mr. Dunn,
 'Keep clear of her snoot!'
 How the old tub can run!

Our captain's name was Galarno, our mate was Mr. Dunn,
 And we took the lead of all the fleet, you can bet that she could run.
 When we arrived at Bay City, no load there could we get,
 So we tied up at the boom, my boys, to keep out the wet.

They kept us all a workin' from morning until night,
 For fear we'd go ashore and get a little tight.
 It was wash 'n scrub 'n scrape her decks 'n chains 'n spars,
 And we worked and grumbled and swore like any other tars.

It ends:

And down the Michigan shore Fort Gratiot Light appeared,
 And Sanilac we lost as the river we drew near,
 My song now I'll close and truth to you I'll tell:
 Ship on no lumber barge—you'd better live in Hell!

A tow of schooners approaching Lake Erie from above the Detroit River is described in the following fragment,

We leaves Detroit behind us,
 We sets our canvas tight;
 The tug slows up and casts us off,
 Old Erie heaves in sight!

She may be jes' a ripplin',
 Or she may be blowing so
 You'd swear that whiff of D.C. feed
 Came clear from Buffalo.

So we watch our tiller closer;
 We keeps our sheet ropes clear;
 There's no sich thing as stiddy wind
 Around Lake Erie here.

'D. C. feed' was a strong-odored condensed food carried to feed horses or mules aboard the timber-droghers.

Another fragment describes the beginning of a race through the Flats into Lake St. Clair:

On the eighteenth of December,
 The weather it was fair;
 The *Darius Cole* and *Mackinaw*
 Were crossing Lake St. Clair.

The *Darius Cole* had often said
 She could beat the old *Mack's* time:
 'Now boys, here comes the *Mackinaw*,
 We'll leave her far behind'

Through the Old Channel she took her course
 An advantage for to find,
 But when she got around the Cut,
 The *Mack* was just behind.

The *Mackinaw* then opened up
 With all speed she could contrive,
 And came 'long side the *Darius Cole*
 Much to the *Cole's* surprise.

Then through the water these straining craft
 Side by side they flew;
 Great sport it was for all on board,
 Both passengers and crew.

They met a tow acomin' up;
 The *Mack* outside must take;
 The *Darius Cole* kept on her course,
 And gains began to make . . .

A suggestion of a more serious episode is given in the following fragment:

The *Nimick* and the *Tyrone*
 Together they set sail,
 And when abreast of False Presque Isle
 Were caught in an angry gale.
 The towline of the *Tyrone*,
 As strong as it was, give way,
 And then there was a panic on
 That cold October day.

Other songs and fragments picture to us the carefree, exciting life aboard these lake schooners. They are concerned with the sailors' lady friends ashore, their troubles with vessel owners, loss of their shipmates in accidents, and other subjects.

The following lively song tells of a fleet of grain carriers leaving Chicago for Buffalo, and the race they had down the lakes. It tells of their towing out of the Chicago harbor into a pretty strong blow, and of their starting down the lake with a large fleet of others. Their canvas is put on 'to a hearty halyard song':

The wind's nor'west and a blowing all night,
 See them big seas roll with their bonnets all white!
 And far o'er our starb'rd rail
 Is a half a hundred sail—
 Hooray for a race down the Lakes!

They hoist a broom high a'top their mainmast as a challenge to the others, and then put on all sail:

The rainbows playing forward and the foaming wake aft,
 With her decks all aslant beneath her bending mast;
 See the old man grin
 As she bellies in the wind—
 Hooray for a race down the Lakes!

They skirt the western shore of Lake Michigan and finally near the Straits, and the song ends:

Let the old ponds roar
 As they've often done before—
 Hooray for a race on the Lakes!

These stories and songs that have come down to us from the lore-building era of the 'great white wings' on the lakes give a refreshing glimpse of the unique life once lived about Michigan's extensive shores, but now forever gone. The 15,000-ton steel bulk-carrying freighters, the characteristic vessels on the lakes today, brought efficiency and dispatch to Lakes commerce, and industry and 'respectability' to the sailors, but at a cost of most of the romance that filled the sails of the old schooners.

Artists and Craftsmen

THE story of art in Michigan begins upon a note of neglect, natural enough in a pioneer State. But when the ground breaking was over and the great fortunes of the latter half of the nineteenth century were growing, local art was still overlooked. The newly rich accumulated paintings and sculpture primarily from Europe, with occasional purchases from artists in the cultural centers along the eastern seaboard. In their turn, native artists left the State and studied and made their reputations abroad or in the East. It is only in recent years that museums, schools, Government institutions, and an awakened public interest have begun to nurture the roots of local art.

Among the first artists to appear on the local scene were the amusing itinerant 'limners.' These portraitists entered the Territory loaded with large assortments of canvases complete except for the face. The prospective owner made his selection of body and dress, and the artists then performed a lightning job of finishing the work, often accepting a night's lodging in the barn as compensation.

More closely linked with the early life of Michigan was the work of woodcarvers and other craftsmen. Figureheads were made for shipbuilders of the 1830's to 1860's. A few of these still survive; an Indian figure from the ship *Forest Queen* of Marine City is now in Edison Institute, Dearborn; another, a small carving of a woman, was discovered in Algonac and has been acquired by the Marine Museum at Newport News, Virginia. When figureheads went out of fashion, carved scrollwork continued to adorn the prows of lake vessels, and the pilot houses of the steamboats that replaced the sailing ships generally bore an eagle or other decoration. With the increased use of metal construction, such carving has all but ceased.

Until the rise of a sophisticated taste in period ornamentation, furniture and buildings were decorated with simple geometric and representational designs in carved and turned wood, fashioned by crafts-

men who, like most folk artists, remain anonymous. Lumberjacks whiled away their evenings by whittling spring fans, pinwheels, balls in cages, chains, and models of their lumbering tools.

An unusual number of early puppets and marionettes are to be found in Michigan. David Lano, who was director of the Children's Theatre, a unit of the former Detroit Federal Theatre, owns and uses 20 puppets carved by members of his family between 1800 and 1860. The oldest was fashioned by Mr. Lano's great-grandfather. All but one are entirely of walnut, and all represent traditional Italian characters.

Iron foundries, between 1850 and 1890, produced ornamental deer, nymphs, rustic benches, over-window spandrels, hitching posts, and weather vanes in forms often graceful or humorous. Bent wire was fashioned into flower baskets, garden arches, and objects of many kinds. Cast-iron and bent-wire ornaments began to disappear at the beginning of this century, but their production has recently been revived.

The itinerant weaver and the household loom stayed on in the smaller communities until late in the nineteenth century. Homespun wool and linen followed traditional patterns, brought to Michigan from the East and the Old World. Patchwork quilts, embroidery, and hooked, braided, and woven rag rugs were as varied in design as the tastes and backgrounds of the women who made them.

Handmade tools, utensils, and furniture of the pre-machine age, even when devoid of ornamentation, are interesting as art because of skilful handling of materials and adaptation of form to use. Glass and pottery were made in Michigan from the 1830's onward, and early pieces frequently show pleasant form and color. Local furniture, made of cherry, walnut, and pine, followed the fashions of the day, in a provincial simplification, until the development of mass-production methods in Grand Rapids.

The design of the early industrial age in Michigan (about 1870-1910) tended to resemble the art of the handicraft era. Cast-iron stoves bore panels of stiff arrangements of fruit or awkwardly fashioned Gothic tracery. Machinery was touched with color and gilt, and its form distorted to satisfy a taste for the ornate—even the early Michigan automobiles were painted and striped like gay carriages.

James Otto Lewis (1799-1858) contributed the first school-trained Michigan art in his Government-commissioned paintings of Western Indians. During his residence in Detroit, he received \$5 for designing the seal of the City of Detroit; the same motif is still used in a new version, modeled by Ulysses Ricci of New York in 1919. Steel en-

graver, as well as painter, Lewis employed both media in his frequently copied portraits of Father Gabriel Richard, early Michigan statesman and priest of Ste. Anne's, Detroit's first established church. Lewis later accompanied Governor Lewis Cass on a treaty-making tour through Indian territories, executing drawings of Indian chiefs, among them the famous Black Hawk. His work was sent to the Smithsonian Institution in Washington, where it was destroyed in the fire of 1865. Fortunately, lithograph copies in color had been made, and these are now rare and much-sought Americana. Two portfolios of his sketches are in the Burton Historical Collection in the Detroit Public Library.

J. M. Stanley (1814-1872), who came to Michigan from New York State in 1834, won repute for his striking pictures of Indians. His paintings, *Indian Chiefs of the West*, 152 in number, were also lost in the fire at the Smithsonian Institution, where they had been temporarily stored. An example of Stanley's work, *Indian Telegraph*, is in the permanent collection of the Detroit Institute of Arts.

Gildersleeve Hurd made his home in Detroit in the 1820's, decorating many homes with the landscape panels then in vogue. These landscapes were usually painted on canvas and affixed to the walls with moldings. Occasionally, Hurd also did portraits for prominent townspeople. T. H. O. P. (Alphabet) Burnham, who studied the local scene without the aid of formal training, is remembered by one picture at the Detroit Institute of Arts, *State Election of 1837*, a lively and somewhat satiric work. Burnham was referred to by contemporaries as a portrait painter of talent, but little is known of his life or of the fate of his paintings.

There were several other early artists whose careers are significant. C. V. Bond spent the years between 1846 and 1853 in Michigan painting portraits, one of which, his likeness of James Van Dyke, an early mayor, hangs in the City Hall. Frederick Cohen, whose *Self Portrait* is owned by the Detroit Institute of Arts, did decorative panels on passenger boats, between 1837 and 1855. Alvah Bradish, a New Yorker, came to Detroit in 1837 and painted portraits of many of the State's notables, including John Biddle and Governor Lewis Cass. He became professor of fine arts at the University of Michigan in 1852. Jasper F. Cropsey (1823-1900), of New York State, visited Ann Arbor in 1855 and made the first paintings of the university campus and the observatory. Cropsey, a practicing architect who took up painting, became well known for his landscapes, particularly his Hudson River scenes. The University of Michigan has a collection of more than 100 casts

and models of the work of Randolph Rogers (1825-92), sculptor, whose *Soldiers and Sailors Monument* is in Campus Martius, Detroit. L. T. Ives, a lawyer, turned to portraiture and attained considerable success, establishing a clientele that was later taken over by his son, Percy.

Ives was among the artists who participated in Michigan's first art exhibition, held in Detroit in 1852. This exhibition aroused sufficient interest to be repeated the following year; but several decades elapsed before a solid contact was established between artists and the public. In 1875, the Detroit Art Association was formed by local art patrons and artists for the purpose of inaugurating a permanent gallery; this association endured, however, only two years. It was not until 1883 that the Detroit Museum of Art set up a permanent exhibition.

Robert Hopkin (1837-1909), marine painter born in Scotland, exhibited in Michigan's first art show and became the leader of Michigan artists of his day. In 1907, his friends honored him by naming the State's first fellowship of artists the Hopkin Club—the present Scarab Club in Detroit. In 1911, this group initiated the Michigan Artists' Exhibition, the most important annual art event in the State; it is now held in the galleries of the Detroit Institute of Arts. In 1938, 1,200 works were submitted for the show, 260 being accepted.

Julius Melchers, a fugitive from the German revolution of 1848, came to Detroit in 1855 and became prominent among local woodcarvers and craftsmen. Between 1870 and 1890, his shop turned out hundreds of wooden Indians and other figures used as trade symbols. An excellent stonecarver as well, Melchers cut the small sandstone figures at the base of the tower of Detroit City Hall, and the stone statues of La Salle, Cadillac, Father Richard, and Father Marquette, standing in niches in the façades of the building. The statue of Father Marquette was copied by Melchers from a Marquette modeled by John M. Donaldson, architect.

Melchers opened Sunday morning art classes at Arbeiter Hall, and here many artists later prominent in the State received their first instruction. Before 1850, painting in Michigan had consisted largely of portraiture and naturalistic records of Indians and of local scenes. The establishment of Melchers's art school coincided, however, with an immense broadening of the horizon of American art. In the latter half of the nineteenth century, American painting deepened its contact with new currents in Europe, bringing into being local versions of the new atmospheric landscape painting of the Barbizon School, the color and

light experiments of the impressionists, the objective genre of the realists, and the varied psychological investigations of post-impressionism. Step by step, Michigan artists succeeded in taking their place within these developments.

Among Melchers's pupils was his son, Gari (1860-1932), whose honors and awards have made him Michigan's foremost artist. Gari Melchers later studied in France and Holland, and, in the strong forthrightness of his character studies, critics have found a kinship with the early Flemish masters. His murals, *War and Peace*, originally painted for the World's Columbian Exposition, are now in the main reading room of the University of Michigan Library; replicas of them hang in the Library of Congress. Examples of his work are to be found in leading galleries of Europe and America.

Students of Julius Melchers's school who gained reputations here and abroad were: A. B. Wenzell (1864-1917), who later became known nationally as an illustrator; Joseph Gies (1860-1935), especially admired for his landscapes; and Myron Barlow (1873-1937), who painted the Jewish-history murals in the dome of Temple Beth El in Detroit, and who later studied in Paris and worked for regular periods in France, where he received the Legion of Honor.

Joseph Gies, after studying in Europe, joined with Francis P. Paulus (1862-1933) to found the Detroit Art Academy. Later Paulus, like many of his contemporaries, felt the need for European instruction and went abroad. John P. Wicker (1860-1931), another native artist, became Gies's partner, and in 1911 the Art Academy became the Wicker School of Fine Arts. The school offered instruction in drawing and painting from life. Wicker had studied in Paris and, though he attended academic institutions there, had been strongly influenced by the post-impressionists. In his school in Detroit he taught in line with new trends, subordinating his own creative work to the education of his pupils. He has influenced most present-day local artists either directly or through their instructors, and he has been credited with doing more for Michigan art than any other individual. Leading painters of the State who studied at his school include: Joe Kraemer (1872-1938), Judson Smith (b.1880), Jan Boorsma (b.1893), Roy Gamble (b.1887), Walter Speck (b.1895), Joe Sparks (b.1896), John Pappas (b.1898), Willard Nash (b.1898), Edgar Louis Yaeger (b.1904).

Julius Rolshoven (1858-1930), Michigan artist, painted much in Italy, where his work was highly regarded. On his return to America, he spent many seasons with the early Taos group in New Mexico, paint-

ing landscapes of the Southwest. The Detroit Institute of Arts possesses work of Leon (b.1868) and Theodore Scott Dabo (b.1877), both born in Detroit of French parentage. Leon, who left the city when he was 16, is widely known for his ecclesiastical decorations and his Hudson River scenes.

Frederick Carl Frieseke (b.1875), of Owosso, whose paintings have been hung in the leading museums of the world, has won international honors, including the Chevalier of the Legion of Honor from the French Government. Ezra Winters (b.1886), who spent his early life in Manistee and Traverse City, later attained prominence for his exceptional murals and friezes in public buildings in Washington, D. C., New York City, Detroit, and other cities.

During the opening years of the twentieth century, Grand Rapids became an important center of Michigan artists. Among the painters of that city, Thomas Gilbert White (b.1877) is represented in many museums, galleries, and Government buildings; Mathias J. Alten (1871-1938) was a painter and teacher; Frederick S. Church (1842-1923) was an etcher and painter of figures and animal life. Now living in Grand Rapids are Alexander Flynn, portrait painter; Anton Lang, wood carver from Oberammergau, who is employed in furniture and ecclesiastical carving; Stanislav V'soske, designer; and Mathias J. Alten, painter. Ann Arbor is today also the home of several artists, including Avard Fairbanks, sculptor; Jane C. Stanley, Leon Makielski, and Jean Paul Slusser, painters. Paul Honore (b.1885), a resident of Royal Oak, who designed the exterior decoration for the Midland Court House has murals in numerous Michigan cities and has illustrated many books.

Judson De Jonge Smith (b.1880) of Grand Haven, represented in the Detroit Free Press Building by six murals, the *Spirit of Progress*, has become director of the Woodstock School of Painting in New York State. Another absentee is the etcher, Alfred Hutton (b.1878), also born in Grand Haven, whose works are in many American galleries and museums, including the Detroit Institute of Arts. Contemporaries of these artists who live in the State are E. H. Barnes (b.1873) and William Greason (b.1884), both represented in the Detroit Institute of Arts; Jean Paul Slusser (b.1886), painter, etcher, and wood carver, associated with the University of Michigan; and Roy Gamble of Detroit, whose local-historical murals are in the Detroit Free Press Building. John Carroll (b.1892, Kansas City), head of the Painting Department of the Art School of the Society of Arts and Crafts in Detroit, and Zoltan Sepeshy (b.1898, Hungary) have done much work in Mich-

igan. Marie Perrault, painter of children's portraits, and well known in Holland and France where she studied, has lately received attention for her quaint portrait dolls, representing mythological, historical, or contemporary characters.

Mary Chase Stratton (b.1867), distinguished in the field of ceramics, is one of the important creative artists born in Michigan. Her exquisite glazes have called attention to the products of the Pewabic Pottery Company, which, with Horace J. Caulkins, she founded in 1904. Mrs. Stratton's outstanding American work is the ceramic decoration of the Shrine of the Immaculate Conception at Washington, D. C. Olivia Calder (b.1909), ceramic artist, Iris Miller (b.1881), painter, and Helene Maynard White, painter and sculptor, are other women artists, resident in Michigan, whose work has won recognition.

Prominent younger Michigan artists are Jaroslav Brozik (b.1904, Czechoslovakia), painter and graphic artist of Flint; Harold Cohn of Detroit, pupil of Carroll; Allan F. Thomas (b.1902) of Jackson, well known for illustrations and woodcuts; Sarkis Sarkisian (b.1909, Smyrna), a pupil of Wicker, who recently won first prize at the 20th Annual Exhibition for Michigan artists; the sculptor, Samuel Cashwan (b.1900, Russia), Stephen Pope Dimitroff (b.1910, Bulgaria) of Flint, who was assistant to Diego Rivera on the murals in the Detroit Institute of Arts; David Fredenthal (b.1914) of Detroit, watercolorist, who was recently awarded a Guggenheim Fellowship.

The Detroit Institute of Arts building, designed by Paul Cret, was completed by the City of Detroit in 1927 at a cost of more than \$4,000,000. Under the direction of Dr. W. R. Valentiner, noted critic and collector and authority on Rembrandt, it has become one of this country's major art museums. Dr. Valentiner's influence made possible the famous Rembrandt Show, held in Detroit in 1930; this exhibition of 80 paintings, drawings, and etchings was one of the three greatest Rembrandt exhibitions ever presented.

In addition to excellent collections of European, especially the northern European painters and Italian Gothic sculptures, Asiatic, and American art, the Institute has three large panels and several smaller ones by Diego Rivera, vividly interpreting the Detroit industrial scene; these murals occupy the walls of the Garden Court. With the completion of Rivera's work in 1933, a spirited controversy arose that extended beyond art circles: clergymen, for example, objected to a detail representing the process of immunizing a child against disease, finding in it too close a resemblance to traditional compositions of the Holy

Family; newspapers characterized the murals as 'un-American, incongruous and unsympathetic.' On the other hand, critics throughout the Nation praised the paintings highly, and hundreds of factory workers streamed to the Institute to admire Rivera's picturization of their industrial life; this lively interest was largely responsible for the murals' being preserved.

Frescoes by John Carroll occupy three lunettes in the Institute's gallery of modern art. Entitled *Morning*, *Afternoon*, and *Evening*, the panels present allegorical figures poetically handled.

The Detroit Institute of Arts has made it possible for local artists and students to familiarize themselves with such masterpieces of painting as *Wedding Dance*, by Pieter Breughel, the Elder; *Visitation*, by Rembrandt; *Man with a Flute*, by Titian; *Selene and Endymion*, by Nicolas Poussin; *Portrait of a Donor*, by Raphael; *Madonna and Child*, by Bellini; *Self Portrait*, by Whistler; and, in sculpture, *Madonna and Child*, by Luca della Robbia, and *Madonna and Child*, by Nino Pisano.

Ranking among the most important institutions and collections that have contributed a growing art education to the State are the Art Collections of the University of Michigan; these include the A. M. Todd collection of painting and sculpture, part of the Randolph Rogers sculpture collection, and noteworthy groups of Occidental and Oriental art located in Alumni Memorial Hall. The small Museum of the Cranbrook Art Academy, for use of student artists, designers, and architects, has assembled interpretive collections of antique art objects, Renaissance and Roman sculpture, Pompeian facsimiles, period furniture, carvings, silverwork, and textiles, drawings, watercolors, and twentieth-century ceramics. The Kalamazoo Museum possesses a distinctive Egyptian room and offers a program of educational activities. The small Hackley Art Gallery of Muskegon has acquired a widely representative collection, including *L'Etang aux Filles*, by J. B. Corot; *Landscape*, by Theodore Rousseau; *Study in Rose and Brown*, by Whistler; *Forest of Fontainebleau*, by N. V. Diaz.

These institutions, as well as the Detroit Institute, have done much to bring art into the lives of Michigan people and to make it possible for present-day artists to receive at least part of their instruction at home. An interesting part of Detroit's educational life is the Detroit Children's Museum, organized in 1919 and now under supervision of the board of education. In the field of art, it contains examples of peasant handiwork from Europe, miniature exhibits depicting Indian craftsmen at work, and material from Egypt, Greece, Rome, and

medieval Europe. Thousands of these exhibits are borrowed yearly by public schools. Art classes for children are conducted in the museum.

Michigan has what is believed to be the largest and most comprehensive collection in America of works on furniture. This collection is in the Grand Rapids Public Library, which also has an art library of 13,500 volumes. Cranbrook, too, has a well-known art-reference library of 5,000 carefully selected volumes. In the fine-art study room at the University of Michigan there is, in addition to a larger reference library, a collection of 12,000 mounted photographs. The Detroit Public Library (Main) contains 20,000 volumes on art and has an annual reference-material circulation of about 50,000. There is also a city-maintained library in the Detroit Institute of Arts, a comprehensive collection used chiefly by the institute staff and students.

The largest art colony in the Midwest is at Saugatuck, with numerous art schools and exhibitions during the summer months. Of special importance is the Summer School of Painting of the Chicago Art Institute, directed by Frederick Fursman. Among resident artists in Saugatuck is Carl Hoerman (b.1885), whose murals depicting lake scenes and agricultural subjects are in Paw Paw High School.

Michigan's growing interest in art is indicated by the number of its art schools—more than 25 in Detroit alone. A well-known center is the Detroit Society of Arts and Crafts, a nonprofit organization, directed by Jan Boorsma. This school maintains the highest standards and, though devoted mainly to the fine arts, supplies instruction also in the commercial branches. Other important schools are the Meinzinger Foundation Art School, founded in Detroit in 1935, and the Cranbrook Academy of Art, headed by Eliel Saarinen (b.1873), famous Finnish architect, with Zoltan Sepeshy and Carl Milles, noted sculptor, on its staff. Cranbrook Academy, which has distinguished itself nationally in the field of design, is also active in the crafts, and its work has had influence in bookbinding, printing, illumination, weaving, needlework, photography, leatherwork, ceramics, and metal work. Crompton Craft Community Center, in the village of Hartland, presents instruction in a wide variety of crafts, and its products are sold in New York, California, and England. Crompton looms are shipped to all parts of the world.

The University of Michigan in its several colleges and schools offers a program combining theoretical, historical, and technical instruction in art. The department of the history of art, in the college of literature, science, and the arts, established in 1910, is the oldest university

department of its kind in the Midwest. Cass Technical High School, in Detroit, has succeeded in maintaining a fine standard: students of the art department have carried off first honors in many high-school exhibits, and a number of Michigan's younger artists had their initial training in this school. Wayne University's art departments, in the college of arts and the college of education, are of growing importance. Michigan State College, at East Lansing, Michigan State Normal College, at Ypsilanti, and the other ranking colleges in the State all have well-organized art departments.

The Michigan Art Project of the Work Projects Administration, directed by Sylvester Jerry, has made the work of several Michigan artists available to tax-supported institutions. Murals by Edgar Louis Yaeger and David Fredenthal and carvings by Gustave Hildebrand (b.1897) are in the Naval Armory, Detroit. Military scenes are the subject of Frank Cassara's (b.1913) murals at Fort Wayne Army Post. The sculpture of Samuel Cashwan (b.1900, Russia) is displayed at Detroit Institute of Arts and at Detroit Public Library. In several Michigan cities are project works by Leon Makielski (b.1885), winner of many awards, Bronislaw Makielski (b.1901), muralist, and Gerald Mast (b.1908), prize-winning landscapist.

Also aiding in bringing together artists and public is the Detroit Artists' Market, a nonprofit group sponsoring regular exhibitions. With its museums, centers, schools, exhibitions, and private and Government programs, Michigan is today the scene of a many-sided expansion of the creative energies of its people.



Literature

AMERICAN writers introduced Michigan to the reading public in early tales of Indian and frontier life. Michigan supplied the background for *Oak Openings* by James Fenimore Cooper (1789-1851), who lived in the State for a short time. A pioneer recorder of Indian lore and legend, Henry Rowe Schoolcraft (1793-1864), first Indian agent at Sault Ste. Marie, provided in his *Algic Researches* the source book that Henry Wadsworth Longfellow used in writing *The Song of Hiawatha*, which is laid in Michigan's Upper Peninsula. Schoolcraft's book preserved the legends and fables of the Algonic tribes, who, in 1600, occupied most of the United States east of the Mississippi. The character of Hiawatha was patterned after Manabozho, an Indian man-god somewhat similar to the Greek Achilles. When Longfellow was accused of plagiarizing from the Finnish epic, *Kalevala*, he wrote:

All these strange stories are in Schoolcraft and other writers on Indian matters, and this ought to shield me from any accusation of taking them from Finnish sources.

In his 'Queen of the Woods' and other Indian tales and sketches, Chief Simon Pokagon (1830-99) sought to create a better understanding between his race and the white. Constance Fenimore Woolson (1838-94) is chiefly remembered for her stories of the frontier and for *Anne*, a novel of Michigan life (see *Mackinac Island*). Caroline Kirkland (1801-64) lived for a time in the heart of a forest region near Detroit and wrote, from this experience of backwoods life, *A New Home* (1839), *Forest Life* (1842), and *Western Clearings* (1846).

Michigan poetry began with several nineteenth-century writers whose works today hold a historical rather than a literary interest. Chief of these is Julia Moore (1847-1920), whose *The Sweet Singer of Michigan Salutes the Public* went through three editions. Published in 1876, in honor of the Nation's centennial, the work became an almost overnight success, when the press gave it long serio-comic reviews. Unaware

of their satire, Mrs. Moore included 74 of these reviews in a later edition. Her poems were masterpieces of inept versification and thoroughgoing sentimentality, lauding such diverse subjects as the Grand Rapids Cricket Club, the Temperance Reform Clubs, and Andrew Jackson. Many were written at the death of some neighbor's child; the following parody of these appeared in the introduction to a reprint edition:

We have lost our little Hanner in a very painful manner,
And we often asked, How can her harsh sufferings be borne?
When her death was first reported, her aunt got up and snorted
With the grief that she supported, for it made her forlorn.

It may be questioned that Mrs. Moore remained unaware of the tongue-in-cheek attitude that greeted her work, for, in the last stanza of 'The Author's Early Life,' she admonished her readers as follows:

And now kind friends, what I have wrote,
I hope you will pass o'er,
And not criticise as some have done,
Hitherto heretofore.

From the general sentimentality of the late nineteenth century, Will Carleton (1845-1912) produced *Over the Hills to the Poorhouse*. Ben King (1857-94), 'The Sweet Singer of Old St. Joe,' with his popular 'If I Should Die Tonight' and other humorous ditties, shared a warm place in the hearts of readers with Rose Hartwick Thorpe, whose 'Curfew Shall Not Ring Tonight' had a long history of schoolroom recital. James David Corrothers (1869-1917) was a Negro poet of Cass County; one of his most famous poems was 'To Be Negro in a Day Like This.' His lyrics and articles appeared in the *Century* and other magazines.

The saga of Paul Bunyan, giant lumber boss, whose epic feats went the rounds of the lumber camps, from Canada and Maine to Michigan and the Western States, has had a genuinely original expansion in Michigan's timber country. The legend remained virtually unexploited until 1924-5, when both Esther Shephard and James Stevens published collections of Bunyan stories. Seeking to trace the legend to its sources, Stevens, a Pacific Coast writer, came to the Saginaw Valley in 1930 and remained for a year writing *The Saginaw Paul Bunyan* (1932). Later he wrote many short stories with settings in the Michigan lumberwoods and mill towns. An excellent version of the heroic lumberman's exploits is *The Adventures of Paul Bunyan* (1927), by James Cloyd Bowman, head of the English department, Northern State Teachers College in Marquette.

The vigor of the Michigan lumber industry is reconstructed in the novels of Eugene Thwing, Stewart Edward White, and Harold Titus. Thwing, perhaps the first to use the Michigan lumberwoods as a locale, is best known for his *The Red Keggers*. White described life in the lumber camps in *The Riverman* (1908) and *The Blazed Trail* (1902). Titus utilized his knowledge of conservation purposes and practice in the novel *Timber* (1922), and in more recent short stories he re-creates life in various sections of the State with sincerity and vigor.

White was the father of the 'he-man' type of fiction in Michigan (which naturally developed from the dominance of the 'great out-doors' in the State's literary tradition), the most popular exponents of which were Rex Beach (b.1877) and James Oliver Curwood (1878-1927), both native Michiganders. Curwood projected some of his earlier tales against a Michigan background. Among his best sellers were *The Honor of the Big Snows* (1911), *The Flower of the North* (1912), and *The Valley of Silent Men* (1920). Among the writings of former Governor Chase S. Osborn, who was born in Indiana but has spent most of his life in Michigan, one book at least, *The Iron Hunter* (1919), is 'as indigenous to Michigan as the Northern Spy Apple.'

A number of Michigan authors, writing in the first two decades of the twentieth century, have used the natural setting of Michigan as background for their books. William Briggs MacHarg, best known for his collection of mystery stories and those published in popular periodicals, although born in New York, came of a Michigan family and attended the University of Michigan. In collaboration with Edwin Balmer, he wrote *The Indian Drum* (1917), a mystery tale of the Great Lakes. Helen Rose Hull, author of *Quest* (1922), *The Surrey Family* (1925), and *The Asking Price* (1930), who was granted a Guggenheim Fellowship for creative writing in 1931, also used the Michigan scene in *Islanders*, published in 1927. Webb Waldron, whose books of travel are illustrated by his wife, published *We Explore the Great Lakes* in 1923.

James B. Hendryx (born in Minnesota), one of the country's most prolific producers of adventure fiction, lives near Sutton's Bay. His *Connie Morgan* series of books for boys is widely known. He is author of more than a score of novels of the Far North.

Arnold Mulder of Holland, Michigan, professor of English at the Western State Teachers College in Kalamazoo, has used his boyhood locality as background for several novels, most memorable of which is *The Sand Doctor* (1921). In 'Authors and Wolverines' (the *Saturday*

Review of Literature, March 4, 1939) Professor Mulder estimates Michigan literature critically and authoritatively, but with engaging humor.

Other native writers have not been so closely associated with Michigan in their work. One of the early University of Michigan graduates to attain prominence in the literary field was Stanley Waterloo (1846-1913), who is said to have influenced the work of Jack London. His *Story of Ab* (1897), a tale of the times of the cave men, was widely read. His last book, *Son of the Ages* (1914), also dealt with the progress of primitive man. Henry Alverson Franck, author of *A Vagabond Journey Around the World* (1910), a narrative of personal experience, has written many travel books. *Samadhi* (1923), which stands as one of the greatest elephant stories ever written, was the work of Will Livingston Comfort. Some of Comfort's many books—particularly *Child and Country* (1916) and *The Hive* (1917)—are based upon educational experiments he carried on at his home overlooking the Ontario shore of Lake Erie.

Clarence Buddington Kelland, creator of 'Scattergood Baines,' was born in Michigan in 1881 and began his career by writing fiction for *The American Boy*, published at Detroit. David Grayson (Ray Stannard Baker), also a Michigander, has written a series in popular philosophy, of which *Adventures in Contentment* (1907) and *Adventures in Friendship* (1910) are the best known. Under his own name, Baker distinguished himself as the official biographer of Woodrow Wilson in *The Life and Letters of Woodrow Wilson* and *Woodrow Wilson and World Settlement*, an account of Wilson's part in the making of the Treaty of Versailles.

Michigan shared in the conflicting literary developments of the 1920's, when rural life and the tide of immigration came in for their share of attention. John T. Frederick brought *The Midland*, a regional magazine, to Michigan in 1920, and his *Green Bush* (1925) expresses a positive approach to farm life in the State.

G. D. Eaton's novel *Backfurrow* (1925), though little known, remains a milestone in the development of American realism. The novel was accepted for publication by G. P. Putnam's Sons, while the late George Haven Putnam was abroad. Mr. Putnam, upon his return, was shocked by the author's outspoken criticism of rural manners and morals; after some concessions were granted by Mr. Eaton, the publisher permitted the book to be printed and advance promotion to be released, but forbade all future publicity and the sale of *Backfurrow*

in any of his retail book stores. Eaton later became editor of the magazine *Plain Talk*. Leonard Cline (1893-1929), poet and novelist, dealt in his novel, *God Head* (1925), with the Finns who work in the Michigan mines. Lee J. Smits' *Spring Flight* (1925), the story of a Detroit newspaperman, introduced in Michigan literature the realistic approach to city life.

Karl Detzer described the contemporary northern Michigan scene in a series of short stories that appeared in national magazines in the 1920's. His 'Car 99,' from a group of stories of the Michigan State Police, was later adapted for motion pictures under the same title. He is well known, too, for his popular-interest articles on persons and institutions.

The most favored contemporary poets in Michigan are Edgar A. Guest and Anne Campbell, newspaper bards of Detroit. Written in the spirit of optimism and sentimentality, their syndicated verse reaches millions of readers; Guest's books sell by the hundreds of thousands, and Miss Campbell's collections have a large audience. Another popular poet is Douglas Malloch, whose book of verse, *Come on Home* (1923), has gone through several editions.

The poetry of Robert Gessner and Leonard Cline is of a different order. Gessner is a proletarian poet, whose best-known book is *Upsurge*. Cline's novels, *Listen, Moon* (1925) and *Dark Chamber* (1927), published before his death at the age of 33, show his poetic inclination. *Afterwalker*, a collection of poems, was issued posthumously by the Viking Press in 1930. Another Michigan poet, Wade Van Dore, a protégé of Robert Frost, gained recognition with a collection of poems, *Far Lake*, published in 1930.

Michigan's contemporary scene is providing varied subject matter to an increasing number of writers. Mildred Walker in *Fireweed* (1934) tells of life among the Scandinavians of a small lumbering town in upper Michigan during the depression. Eleanor Blake utilized her home State in *Seedtime and Harvest* (1935), about which the critics, employing strong language, could not agree. A story of the Dutch immigrants in Michigan was told by David Cornel DeJong in the novel *Belly Fulla Straw* (1934). His *Old Haven* (1938), a novel dealing with life in the Netherlands, was praised by reviewers. Sidney Corbett, a Detroit businessman, while confined to a hospital in 1933, wrote *The Cruise of the Gull-Flight* (1937), done partly for, and partly about, his children. Dealing with life on the Great Lakes and on Georgian Bay, the book sold well and was widely acclaimed. Miss Kenneth

O'Donnell Horan presents the lighter side of Michigan life in a trilogy, the first two volumes of which, *Remember the Day* and *Oh, Promise Me*, were published in 1937 and 1938.

With the expansion of industry in this century, writers began developing occupational themes, particularly those dealing with the automobile industry. In *F.O.B. Detroit* (1938), Wessel Smither deals realistically with life among Detroit's automobile workers. Not a Michigan man, he based his narrative on a few years' experience as a Detroit resident, but he vividly portrays the effects of the factory system upon the workers. Lawrence Conrad in *Temper* and James Steele in *Conveyor* also used the automobile industry as a literary source; with Robert Gessner, the poet, they are perhaps the best known among Michigan proletarian writers. Harold Titus's stories of the Michigan automotive industry appear in the *Saturday Evening Post* and other magazines.

Arthur Pound, a native of Michigan and a graduate of the State university, has given a remarkable record of the industrial growth of southeastern Michigan and the problems developing from and with it. His *The Iron Man in Industry* pioneered in a critical appraisal of mass production and its social implications, and *The Turning Wheel* (1934) is a history of General Motors. His *Once a Wilderness* (1934) and *Second Growth* (1935) are novels of the State's development.

Among Michigan's important nonfiction writers is Paul de Kruif, popularizer of medical science and biographer of great medical men. De Kruif, a Michigan resident, was born in Zeeland, Michigan, in 1890, obtained his scientific training at the State university, and subsequently taught there. He is the author of *Microbe Hunters* (1926), *Hunger Fighters* (1928), *Men Against Death* (1934), *Why Keep Them Alive?* (1936), and *The Fight for Life* (1938), and he supplied much of the scientific and medical background for Sinclair Lewis's *Arrow-smith*. Constance Rourke is the author of several works, including the popular *Troupers of the Gold Coast, or the Rise of Lotta Crabtree* (1928); her *Audubon* (1936) is considered one of the finest books in its field. Another in the front rank of Michigan women is Harriet (Lauren) Gilfillan, a proletarian writer who drew upon her experience in a small Pennsylvania mining town for *I Went to Pit College*, which was a Literary Guild selection in 1934. Webb Miller, newspaperman and correspondent, wrote in 1936 an autobiographical work, *I Found No Peace*, a section of which tells of his youth in Michigan.

Nationally known writers born in Michigan include Max Miller, Ring Lardner (1885-1933), Edna Ferber, and Helen Topping Miller.

Ernest Hemingway spent most of his boyhood in Michigan, and his first book, *Three Stories and Ten Poems* (1923), has a Michigan background. Carl Sandburg, Chicago poet, lives in Michigan; Lew R. Sarett, another Chicago poet, spent most of his youth here and for a while studied at the University of Michigan; and Frazier Hunt, whose *The Education of an American* (1938) records a newspaperman's reactions to the modern world, is also a member of the colony of artists and writers who have gathered together in southeastern Michigan (see *Holland*). William Lyon Phelps, a Michigan resident during the summer, 'affectionately dedicated to the people of the Michigan Thumb' his *Adventures and Confessions*.

With its attention focused primarily upon industry, Michigan did little in the past to encourage any but its 'popular' writers. There are agencies today, however, that may render tangible aid to native writers desirous of serious critical attention. At times a chair of resident poet has been maintained at the university. One of the most distinguished and influential writers to hold this post was Robert Frost. The recently organized Writers' Conference, held during the summer by Olivet College, brings established authors to lecture and to discuss informally the individual problems of the assembled writers. Ford Madox Ford presided at these meetings several times. A further stimulus is the Avery and Jule Hopwood Award presented yearly by the University of Michigan. The late James Avery Hopwood (1884-1928), successful playwright, provided in his will that prizes of money be awarded annually to authors who produce meritorious creative work while on the campus. Since 1931 the awards have totaled about \$10,000 annually. Hopwood desired that 'the new, the unusual, and the radical' should be encouraged, and Hopwood Awards are not limited to Michigan writers. In the eight years that they have been available, they have attracted scores of aspiring playwrights, poets, novelists, and essayists to the university.

Music

A HARPSICORD at the Detroit military post, imported by a German doctor in 1796, was the only keyboard instrument in the State until 1803, when a piano was transported by horseback from the East to Mrs. Solomon Sibley. Several years later, a small pipe organ was installed in Ste. Anne's Church, but amazed and fascinated Indians promptly stole the pipes.

The Michigan pioneers developed little or no folk music. The lumbermen had their own songs, roared in the forests and in mill-town saloons, but the melodies were not original, and the versifying was generally a transparent adaptation of tales popular with the lumberjacks of Maine and Canada. Several chanteys of the Great Lakes sailors, however (*see Marine Lore*), were compounded of indigenous elements.

An influx of German settlers stimulated the formation of music societies in the 1840's. The first music convention, a milestone in the cultural development of Michigan, was held at Detroit in 1851. Wilhelm Bendix organized a large orchestra at Detroit in 1869, but its subscription concerts barely returned the musicians a living wage. Wilhelm's son, Max, the violinist, was the concert master of the Theodore Thomas (Chicago) Orchestra between 1886 and 1896, and later held the same position at New York's Metropolitan Opera House.

In the last two decades of the nineteenth century, music lovers throughout the State formed numerous groups, playing for their own pleasure and arranging public concerts. The St. Cecilia Society of Grand Rapids, with a membership wholly of women, dates from this period. Since 1893, the society has had its own building and has been the dominant influence in the city's musical life. Of the many German music groups that sprang up in Detroit, the longest-lived has been the Harmonie, a singing society organized in 1872 and still popular, though no longer purely German in membership.

Detroit entered the ranks of musically respected communities in 1886, with the formation of the Detroit Philharmonic Club, a string

quartet that subsequently became one of the best chamber-music groups in the country. A club of similar importance, organized about the same time, is the Women's Tuesday Musicale, which first brought to Detroit such musicians as McDowell, Kreisler, and Paderewski.

The forerunner of the present Detroit Symphony Orchestra was the Detroit Orchestral Association, conducted by N. J. Corey, which brought many fine orchestras to the city for subscription concert seasons. The first permanent and independent symphony, formed in 1914 with 60 musicians, was conducted by Weston Gales until 1918, when dissension among the sponsors and lack of support led to his resignation. Ossip Gabrilowitsch (1878-1936), distinguished pianist and conductor, was offered the post on his own terms—one of which was the erection of a suitable home for the orchestra. Wartime prosperity enabled Detroit to subscribe the necessary funds, and Orchestra Hall was opened in October 1919. Following Mr. Gabrilowitsch's death, Franco Ghione, of Milan, Italy, was engaged to direct the symphony. Increased attendance and enlarged activities led to the removal of the orchestra to the Masonic Temple in 1939. Besides the regular symphony concerts, 20 popular concerts and 5 children's concerts are given each season, and programs are offered in collaboration with the board of education. Free concerts during the summer at the shell on Belle Isle are very popular. Seventy-five of the Detroit Symphony Orchestra's 90 musicians compose the Ford Symphony Orchestra, which has broadcast Sunday evening programs to a large radio audience since 1934.

Under the direction of Thaddeus Wronski, the Detroit Civic Opera Society presented mid-winter seasons of grand opera between 1928 and 1938. Mr. Wronski resigned because of lack of financial support, and it is uncertain whether opera will be resumed in Detroit. After 1930 the operas were presented in co-operation with the Detroit Symphony Orchestra. The society has also presented light opera, recitals, and ballets; annually it brought the Children's Theater Company from New York; and, under the sponsorship of the City of Detroit, it gave free summer-evening concerts on Belle Isle.

The Michigan Music Project of the Work Projects Administration maintains one concert orchestra, two symphony orchestras, five dance bands, and six concert bands. During the 1938-9 season, the Federal Symphony Orchestra of Detroit gave two notable subscription series: 5 programs of Mozart compositions, and a series in which were presented 20 compositions never before heard in Michigan. These 14 units

have played to audiences aggregating 3,000,000 persons since October 1935.

Amateur orchestras and choruses have grown rapidly in Michigan in the past decade. Grand Rapids, Kalamazoo, and Lansing have symphony orchestras that have developed naturally from community interest. Particularly significant recent additions to musical life have been the choruses organized among the employees of large industrial enterprises, such as Chrysler and General Motors. Their concerts, often broadcast, are well attended by the general public. Many national groups in Detroit maintain choruses, orchestras, and bands. Altogether there are 8 large orchestras and 85 choral societies and other musical organizations in Detroit. There are Negro, Finnish, Polish, Ukrainian, Danish, Welsh, Hungarian, Armenian, Croatian, and Serbian singing societies, as well as the Scandinavian *a cappella* chorus, the Jewish Halevy Society, the Bach Chorus, the *Arbeiter-Maenner Chor*, the Rhinegold Male Chorus, and the Verdi Choral Society. An all-Negro production of *Aida*, presented in 1938 by the Detroit Negro Opera Company, was so well received by critics and public that a permanent Negro opera association is planned.

Of unusual interest is America's first Tamburitza Orchestra, made up of 30 Detroiters; in its first concert, in March 1937, only works of Yugoslavian composers were played. Tamburitzas, which somewhat resemble the banjo in appearance, range in size from that of a ukulele to that of a bass viol, and may have four, six, or eight strings. Most American tamburitza craftsmen and players are descendants of the racial groups now included within the frontiers of Yugoslavia.

Among the Detroit societies that have Nation-wide associations are the Orpheus Club, Schola Cantorum, and the exponent of modern music exclusively, Pro Musica. In addition there are several church choirs under eminent directors; among these are St. Paul's Cathedral Choir, Westminster Presbyterian Church Choir, First Presbyterian Church Choir, Church of Our Father Choir, and St. John the Baptist (Catholic Ukrainian of Greek Rite) Boyan Choir, widely known through its concert tours.

Michigan's pioneer work in public-school music has been of importance to the entire Nation. The first high-school music course was planned in 1881 by Dr. Francis York for Ann Arbor's schools; the Detroit Board of Education first fostered high-school orchestras in 1917. A vital and exceptional development is the Interlochen National High School and Band Camp, near Traverse City (*see Interlochen*,

Tour 15), conducted each summer since 1927 for talented students from all parts of America. On the staff are prominent instructors in each orchestral division. An orchestra composed of students gives weekly concerts, which attract thousands of auditors, and are often heard on national broadcasting hookups. In 1926, Michigan State College began to encourage and direct community singing in rural districts. Participation in orchestral playing is encouraged, and in one county the membership of a local orchestra of 30 students increased to 350 in a single year.

Each spring thousands of people travel to Ann Arbor for the music of the May Festival. Performing in its six concerts are famous instrumentalists and vocalists, one of the country's leading symphony orchestras (the Philadelphia Orchestra, in 1940, for the fifth consecutive season), the University Choral Union, and the Children's Festival Chorus. Since it was inaugurated in 1894, the May Festival has presented numerous important American and world premières, such as *The Lament of Beowulf*, *Heroic Elegy*, *Merry Mount*, and songs from *Drum Taps*, all by Hanson; *The Voyage of Arion*, by Moore; *A Symphony of Song*, by Strong; and *Jumbles*, by James—all presented between 1921 and 1938. Among eight American premières, presented during the same period, were *La Primavera* (Spring), by Respighi; *Sea Drift*, by Delius; *Choral Fantasia*, by Holst; *Legend of Kitesh*, by Rimsky-Korsakov; and *Ein Friedenslied*, by Heger.

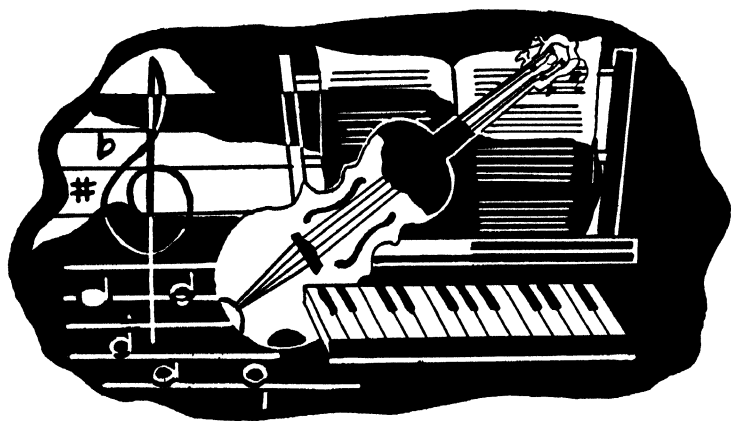
Through its board of directors, the festival's sponsor, the University Musical Society (formed in 1879) has charge of the School of Music at the University of Michigan, which offers graduate and undergraduate courses in all phases of music. Four other schools—the Detroit Institute of Musical Art, the Detroit Conservatory of Music (founded 1874), Michigan State College, and the Detroit Foundation Music School—confer the degree of bachelor of music.

The eminent composer and conductor, Eric DeLamarter, was born in Lansing, Michigan, in 1880. His second symphony, *After Walt Whitman*, is probably best known. Since 1918, DeLamarter has been assistant conductor of the Chicago Symphony Orchestra. For a decade, he served as music critic on various Chicago newspapers, and for many years he conducted the Chicago Civic Orchestra. A leading Chicago organist, he has composed many fine works for that instrument.

Normand Lockwood, teacher and composer, was born in Ann Arbor, Michigan, in 1905. In 1926 he was awarded the Prix de Rome in music and studied in Italy several years. He is the composer of many works

for both orchestra and choruses. His *Ulysses* is among the better known in the former category, and his *Out of the Cradle Endlessly Rocking*, for mixed voices, one of the most recent. It was dedicated to the New York World's Fair in 1939. Mr. Lockwood is at present on the faculty of Oberlin College, Ohio.

Another outstanding composer from Michigan is Leo Sowerby, born in Grand Rapids in 1895. His orchestral works, including the symphonic suite, *From the Northland*, the symphonic poem, *Prairie*, the *American Rhapsody*, and *Passacaglia, Interlude and Fugue*, are frequently performed in America and Europe. Hymns form the basis for some of his works, and he has composed for Paul Whiteman's band such music as *Synconata* and *Monotony*. An important chamber-music composition, *Symphony for Organ*, several choral works, and the *Sinfonietta* for string orchestra indicate further his unusual versatility. Sowerby is on the faculty of the American Conservatory in Chicago. Evangeline Lehmann has probably been more closely associated with Michigan than any other eminent composer born here, and yet she is, paradoxically, the least purely American as a composer. Her cantata, *Sainte Thérèse of the Child Jesus*, first performed in France in 1933, was enthusiastically received; it has had many distinguished performances both in France and in the United States. Among the songs she has composed, the most successful have been from the group *The Children's Festival*. Miss Lehmann has composed 42 piano solos, vocal solos, and pieces for violin and piano.



The Theater

THE first players to tread the boards in Michigan were officers of the fort at Detroit. In 1798 they formed an amateur troupe and began producing *The Rivals*, *The Mock Duke*, and other contemporary favorites, acting before scenery painted by their wives. These productions enlivened Detroit winters until about 1830.

The first professional theater in Michigan, the National, was opened at Detroit in 1849. It was renamed the Metropolitan in 1853, and finally the Comique. Following a fire in 1883, it was rebuilt and later converted into a livery stable. Lawrence Barrett (1838-91), the tragedian, obtained his first role at the age of 15 with the William E. Burton stock company at the Metropolitan, playing Murad in *The French Spy*. Barrett, whose real name was Brannigan, quit clerking in Sheldon's drygoods store, joined the company as a permanent member, and subsequently developed into one of America's finest actors.

Concert halls flourished at Detroit and Grand Rapids in pre-Civil War years. On their stages, drama shared honors with clowns, pianists, pantomimists, and Tyrolean singers. The Detroit Concert Hall, owned and managed between 1857 and 1863 by Jacob Beller, was simply a double store space divided by a row of pillars, one of which was so near the stage that unwary performers were hidden from view. Beller lived above the store with the entertainers and ate with them at a common table. One historian reports that the Detroit Concert Hall 'was a gay old place, and all classes frequented it, from the president of Michigan Central to the Central Market bum.'

The eighties and nineties were noted, not only for blood-and-thunder melodramas, but for what may be termed 'occupational dramas.' The latter, more spectacle than play, inflated policemen, firemen, or railroadmen to epic proportions, amid settings that reached the heights of absurd sensation. *One of the Bravest* showed the rescue of several people from burning buildings, with real horses and fire engines to lend furious, authentic touches. In one play, a freight train of 20 cars slowly

puffed across the stage, 'steam hissing from the boiler, sparks flying.' Another drama, featuring the explosion of a Mississippi steamboat, broke all records for this kind of ingenuity.

The theatrical entertainment of this period was crude according to modern standards but enthusiastically received. Michigan, however, contributed a genuinely skilful playwright in Bronson Howard (1842-1908), regarded by some critics as the 'father of American Drama.' Son of a one-time Detroit mayor, Howard received his schooling in that city, and for many years wrote for its *Free Press*. His first play, *Fantine*, founded on *Les Misérables*, was produced in Detroit in 1864 at the Athenaeum. *Saratoga*, one of his most successful, was produced by Augustin Daly in New York in 1870. It was the first American play to be translated into German, and under the title *Brighton* it ran many seasons in London. Unlike the authors of banal melodramas, Howard strove to interpret the social trends of his day. Dramas on which his fame rests, and probably his best from the critical point of view, are *The Banker's Daughter*, *Young Mrs. Winthrop*, *The Henrietta*, a study of a Wall Street capitalist and his son, and *Shenandoah*, one of the finest dramas of Civil War background.

Big-time vaudeville appeared in Grand Rapids and Detroit at the end of the nineteenth century. The Temple Theater in Detroit opened in 1899, and for 35 years was regularly played by topnotch performers. The Temple established its own standard of entertainment, clean amusement being the first consideration, and the management did its own booking for many years. The opening bill, November 6, included the Hawthorne sisters, Hall and Staley, Valmore, the musician, Perry and White, Mlle Flora, and the Cecilian Ladies' quartette. Polly Moran first appeared in the Temple at the age of 15, and popular visitors were Sophie Tucker, Eddie Foy, Gus Edwards, and Eddie Cantor. Such names as Nora Bayes, Nance O'Neil, and Ethel Barrymore often glittered above the marquee. Between 1923 and its closing in 1933, the Temple Theater was the local unit of the Keith-Orpheum circuit.

Grand Rapids, from the late nineteenth century through the first two decades of the twentieth, was one of the best show towns in the Middle West. The city had its period of 'halls,' followed by the opera-house era inaugurated in 1859. At Power's Opera House, built in 1873 and still used occasionally, great names were often posted: Edwin Booth, Lawrence Barrett, Mary Anderson, Sarah Bernhardt, Robert Mansfield, Mrs. Fiske, and Schumann-Heink. This theater has withstood several fires; since 1923 it has twice been the home of successful

stock companies. Variety—the precursor of the more formalized vaudeville—presenting such roughly amusing acts as the vegetable-dodging Cherry Sisters, was housed in Smith's Opera House, which opened in 1885, displaying for the first time such theater luxuries as tile floors, folding chairs, electric lights, and steam heat. Since the Wright Players disbanded in 1928, Grand Rapids has shared the fate of other Michigan cities, and, indeed, of most American cities, in having no permanent professional group. Infrequent road shows are presented in the Civic Auditorium.

But the theater, as such, was not confined to the metropolitan centers of Michigan. Dozens of smaller communities had their local 'opera' houses, in which traveling troupes offered all manner of theatrical entertainment, from the Lincoln J. Carter melodramas ('with mechanical effects') to the immortal classics.

Even during the era of pine logging, strolling players moved from village to village, often appearing in a room with no production facilities whatever and being forced to construct a makeshift stage and install seats after their arrival in the community.

Later, as a network of railroads covered the State, the troupes became more numerous, and advantages for the presentation of plays became standard equipment in the more ambitious centers. Manistee in one period had its excellent Ramsdell Theater; Traverse City boasted two playhouses; Alpena, Petoskey, Sault Ste. Marie, Marquette, Escanaba and many others were regular stopping places for road companies.

Usually the productions booked for these communities were of a low order, judged by today's standards. Bucolic farce or the wildest melodrama from the pens of Carter or Owen Davis were regular fare, but now and again some player with a true love of his art and enthusiasm for the punishment of the 'road' would tour in Shakespeare or other dramatic offerings of merit.

The 'rep' show of 'stock' company was an institution. With from seven to a dozen actors, these groups would appear in the smaller cities and towns for a week's stand, a change of bill every night and vaudeville acts, or 'specialties,' between acts. The prices were invariably 10¢, 20¢, and 30¢, with ladies, if accompanied by a gent with a top-price ticket, free on opening night.

Still remembered by some Michiganders was the Mack-Leone Stock Company of the first decade of the century, which toured the State annually. The manager, director, producer, leading man, and what-

have-you of this organization was Willard Mack, who, 20 years later, was for a time one of the most prolific writers and play doctors for Broadway producers. Mack was an actor of ability and, by rewriting the plays of Clyde Fitch, J. M. Barrie, Arthur Wing Pinero, and others for this limited personnel, learned all the tricks of dramatic construction. His presentations were not memorable, perhaps, but he did give many upstate boys and girls a glimpse of what the theater might be. This type of theatrical enterprise is, of course, all in the past.

The most widely known of Detroit's theater companies was the Bonstelle Players, directed by Jessie Bonstelle (1871-1932). Born in the East, Miss Bonstelle became a member of Augustin Daly's famed company at the age of 16. After a few years in New York City, she organized the Jessie Bonstelle Stock Company in Rochester, New York, opening with *Camille*. Beginning in 1910, she brought her company to Detroit for yearly summer visits, appearing several weeks each season at the Garrick Theater. Between 1912 and 1917, Miss Bonstelle, in collaboration with Bertram Harrison, was advisory-director of the Northampton (Massachusetts) Municipal Theater, where a notable pre-war experiment was carried out. The idea of a municipal theater was an earnest one with Jessie Bonstelle, and even a stock theater was to her more than a place for the mere copying of Broadway's whims. She wanted a wider variety, including a greater proportion of classic drama, than stock usually allowed.

Thus in 1925 her company was permanently established at Detroit in the old Temple Beth El, a Jewish synagogue converted into one of the country's finest theater-plants (now a motion-picture house). Detroit was chosen because the townspeople had always displayed great affection for Miss Bonstelle and had supported her company well; it was also large enough to sustain the kind of theater she proposed. After three years of excellent production, Miss Bonstelle succeeded in 1928 in reorganizing her company as a non-profit Civic Players group, and the playhouse became the Detroit Civic Theater.

It was not supported by public funds, but it almost attained civic status, owing to the scope of its activities, which included educational programs and dramas, lectures, a professional training school, free children's performances, free outdoor presentations of Shakespearean drama, given in collaboration with the Detroit Symphony Orchestra, and other features. The finest of modern and classical drama was expertly staged and acted, including such widely representative plays as *The Merchant of Venice*, with Blanche Yurka as guest star, *The Living*

Corpse, with Jacob Ben Ami, *Charlie's Aunt*, and Drinkwater's *Bird In Hand*. The Civic Theater seasons were enlivened by stars from England, Greece, Italy, and Germany, as well as notables of the American stage. With the depression, support of the Civic Theater was curtailed. Summer runs of revivals, such as the riotous *After Dark*, which ran 17 weeks in 1929 and almost as long in 1930, helped keep the venture going, however. After Miss Bonstelle's death in 1932, the theater failed, lacking strong leadership and financial backing. A committee, which had directed the affairs of the Civic Theater during its three-year decline, gave up in 1935, although a committee-nucleus hopes to revive the civic-theater idea in the future.

The list of those who worked with Miss Bonstelle (known as a 'maker of stars,' because of her ability to sense the innate talent of young and untried actors) reads like a call board for some of America's finest acting talent: Katharine Cornell, Ann Harding, Alice Brady, Frank Morgan, Melvyn Douglas, William Powell, Jessie Royce Landis, Kenneth McKenna, Gale Sondergaard, and others. During her career she presented 19 world premières, including *Little Women* and *Seventh Heaven*. She negotiated with the Alcott family for several years before obtaining the rights to *Little Women*. In 1912, using a script of her own adaptation, the Bonstelle-directed production opened in Wilkes-Barre, Pennsylvania, for a tryout and then in Detroit for its first run. Alice Brady appeared in the original production as Meg; and, when the play was sent to London for an extended run during its 1922 revival, Katharine Cornell performed her first important part. William A. Brady was the producer, as he was of many première productions that Miss Bonstelle directed. Numerous other New York producers and many playwrights sought first-productions by the Bonstelle organization, and Jessie Bonstelle often went to New York to direct Broadway casts. Her expert advice was always sympathetically given to novice and professional alike.

When the Civic Theater closed, Detroit was left without a permanent professional group. The most important of the amateur groups are the Players' Club and the Contemporary Theater. The Players', with its own fully equipped theater, is a social club, not open to the public except upon invitation. The Contemporary Theater, concentrating on plays of sociological import, finances itself by booking performances—in Detroit and near-by Michigan and Ohio cities—with such organizations as industrial unions and by two full-length productions a year in the auditorium of the Institute of Arts. *Waiting for Lefty*,

Stevedore, and *Bury the Dead* have been successfully staged by this group.

Detroit was one of the first cities in the country to participate in the little-theater movement that became important just before the first World War. The Arts and Crafts Society almost immediately entered the front ranks of pioneering little theaters. At the time it was the only theater in the United States organically connected with an art center. The influence of its production experiments carried over to nearly every amateur and educational theater established after the war. Sam Hume, who had brought Sidney Howard and Irving Pichel to Detroit for an open-air *masque* production in 1915, helped organize the theater and became its director.

During his two years as director at Detroit, Hume evolved for the small Arts and Crafts stage his often-copied 'permanent set,' constructed at minimum expense and flexible enough for use in almost every type of drama. Much has been written of its economy, less about the fact that it was an artistic contribution of note, as well. It consisted of pylons, flats, stair-sections, platforms, folding screens, and hangings. Monotony was precluded by the use of decorative pieces, color, and light. Sheldon Cheney joined the group at the very beginning, editing in this connection the *Theatre Arts Magazine*, a quarterly in which appeared many explanatory articles, now recognized to have had a widespread effect upon the development of America's little theaters. The society dropped theatrical production from its activities in 1918. Hume later directed the outdoor Greek Theater, at Berkeley, California, where Pichel again worked with him. Sheldon Cheney continued to edit the magazine until 1921; in 1925 it became the *Theatre Arts Monthly*, under Edith Isaacs, who maintained its reputation as a true source book of the growing American theater.

The Ypsilanti Players, inactive now for more than a decade, should be mentioned as Michigan's first little theater and as an organization exceptionally faithful to its schedule and to its high artistic standard. Started in 1914, the theater was soon established in an old carriage-house, photographs of which became a familiar sight in national magazines, as the pioneer little theaters attracted more and more attention. Its tiny stage and an auditorium seating about 200 made daring indeed such productions as *The Rhyme of the Ancient Mariner*, recited by a narrator while actors presented pantomimic and tableau representations of the scenes. At least one well-known producer-actor, Robert

Henderson, was developed there. The theater paid no salaries, and deficits were made up by a businessman-enthusiast, Daniel Quirk.

In other cities, notably in Saginaw, Bay City, Flint, Muskegon, Ludington, and Dearborn, small amateur groups are still active; and in Grand Rapids, Kalamazoo, and Lansing the little theaters have been successfully turned into semiprofessional civic theaters.

In keeping with the trend toward the addition of theater training to the courses offered in American schools, Wayne University opened a training department and experimental theater in 1928. The University of Michigan's play-production group was inaugurated the same year; it operates during the summer as the Michigan Repertory Players, presenting a vigorous, new-play-a-week schedule at the Lydia Mendelssohn Theater, an exceptionally well-equipped playhouse on the campus. *Othello*, *The Perfect Alibi*, *Twelfth Night*, *Candida*, and *The Doctor in Spite of Himself* are included in the long and greatly varied list of plays produced.

Known as the Ann Arbor Dramatic Season, a company composed of American and foreign star professionals presents a season of excellent plays, old and new, for five weeks after the May Festival (*see Music*). This, one of the Nation's foremost drama festivals, was directed, from the time of its inception in 1930 until the 1938 season, by Robert Henderson of Ann Arbor. Helen Arthur, long connected with the Neighborhood Playhouse in New York, is now (1940) executive director.

Michigan has contributed several names to the dramatists' ranks, including Lewis Beach, author of *The Goose Hangs High*, John Wesley, author of *Excess Baggage*, Paul Armstrong, who wrote *Alias Jimmy Valentine*, Paul Osborn, whose first play was *The Vinegar Tree*, Zelda Sears, creator of innumerable star vehicles such as *Lady Billy*, *Corned*, and *The Scarlet Woman*, and Robert E. Hayden, gifted Negro poet-playwright, whose drama *Go Down Moses* was an outstanding success in the 1937-8 theater season. In the technical departments are R. Dana Skinner, drama critic, Norman Bel Geddes, producer and internationally noted scenic designer, and Gene Buck and Leonard Sillman, New York producers.

The Development of Architecture

By EMIL LORCH

AN account of architecture in Michigan is an account of architecture in the Northwest. Indian palisade and wigwam were followed by fort, mission, and trading center, and later, when living conditions were less precarious, these were interspersed with simple phases of the Colonial. These were in turn superseded after the French and British periods by the modes of architecture current in Europe, where a series of revivals and a reworking of early styles was going on. These styles, widely adapted in the United States, in less than a hundred years brought about a virtual recapitulation of most of the forms that were evolved by European civilization from the time of the Greeks through the period of Napoleon III. This adaptation of foreign architectural forms has continued to the present day, often with distinguished results; concurrently has gone forward the evolution of modern types of buildings, new materials and methods of construction, and the emerging of a fresh concept of architecture needed to produce new forms and revitalize tradition.

The earliest buildings in Michigan, of both French and English, were palisades, built of tree trunks closely spaced and set deep in the ground. The first Fort Mackinaw, recently rebuilt just south of the Straits, was of a simple palisade type, but in the later fort on Mackinac Island (still standing) the palisaded curtain walls connect two-story block houses of squared logs elevated on a secure masonry base of local stone. The dwellings, churches, and store-houses were also constructed of logs, placed horizontally and chinked with clay. Many such dwellings are still standing in the Upper Peninsula, especially in the vicinity of St. Ignace, where an early settlement was established.

At Detroit, the fire of 1805 destroyed all evidence of French and English architecture inside the closely built barricade, outside of which Quebec's rural architecture was reflected in houses with low, plain walls and high roofs. Much like these is the Biddle House at Mackinac Island, in which clapboarding covers the log-walled structure.

The best-preserved structure of the British Colonial is the charming stone Officers' Headquarters Building (begun by the British in 1781 and completed by the Americans in 1798) within the British fort at Mackinac Island. In it are combined a long and high hip roof, broad stone wall surfaces with small openings, outside blinds and inside shutters, and large rooms with pleasing wood mantels and deep fireplaces, back to back in the massive chimneys. A comfortable though isolated refuge during the long winters, the Officers' Headquarters had a magnificent view to compensate for a social environment composed exclusively of soldiers, Indians, and trappers.

The log house in America, unlike that of Europe, gave way to a more nearly perfect house as soon as money and materials permitted. In Michigan, the saw and sawmill rapidly replaced the ax. Throughout the southern portion of the State are many comfortable, well-built, and interesting clapboarded houses of the early nineteenth century, usually of two stories with ample space and privacy. In some of these houses, projections on the interior, particularly in the corners, reveal the heavy timber framework, which is a European inheritance. Rectangular in plan and parallel with the street, many of these simple dwellings have the low gabled roof, slight molded cornice, small-paned sash, and the door framed with slender pilasters, which are characteristic of New England Colonial design. These New England characteristics are found in such widely separated places as the Snow House, Paw Paw, the Medor Tromble House, Bay City, at St. Clair, and as far north as Mackinac Island in the Agent's House, built in 1822. The latter was the administrative building of the monopolistic American Fur Trading Company's quadrangle and later became the central unit of the John Jacob Astor House, a widely known hotel. Its spacious rooms, broad mantels, simple hall, and graceful stairs are marks of the comfortable and favored Colonial mansion.

The best example in Michigan of a New England Colonial type church is the clapboarded Old Mission Church, built by the Presbyterians in 1830 on Mackinac Island. Its unassuming but appealing interior, a rectangular room like a New England meeting house, holds 'box' pews and a pulpit of well-detailed and harmonious Colonial design. An octangular belfry, with a graceful cupola and quaint weather vane, terminates the square tower.

Although the adaptation of Roman architectural forms to American building, initiated by Thomas Jefferson in Virginia, touched Michigan but slightly, it is seen in the porch of four Roman Doric columns of

the Ballard House in Ypsilanti. With the opening of the Erie Canal in 1825, giving a tremendous impetus to the settlement of Michigan, Greek architectural forms were introduced from the more advanced Eastern States and were used for public buildings and the houses of the more prosperous settlers. Buildings of varied plans and composition, with heavy cornices and other classical details, usually in wood and frequently of formal columnar design, flourished in the southern portion of the Lower Peninsula, where many may still be seen along or near the roads radiating from Detroit.

In 1836, Monroe's Bank of the River Raisin was a four-columnar Greek Doric temple. The cubical flat-roofed First National Bank of Detroit, built in the same year, employed two Doric columns set between pilasters or 'in antis' for its entrance, which now stands in the garden of the Architectural College at Ann Arbor. The old Paine Bank Building at Niles shows the spread of this type of design to the southwestern part of the State.

The temple motif also appeared in two-story form in residences, among them the tetrastylar or four-columnar Samuel R. Sanford, now the Wilmarth house at Grand Rapids, the original main portion of the Nims house, Monroe, and the impressive Samuel W. Dexter mansion, Dexter, which is fronted by a portico of six columns instead of the usual four. The old tavern at Marshall has the less common porch of five columns at the second floor level, in front of the ample ballroom and formerly overlooking the arrival and departure of stage coaches.

An Ionic porch of wood, of fine proportion and purity of design, distinguishes the Judge Wilson, now the George Wahr house, of Ann Arbor, which has stuccoed brick walls. At Adrian, the Governor Crosswell house, of brick, illustrates a more modest type of two stories, with a one-story wing and porch.

As in their prototype, the main gable of these houses faces the street; the entrance at one side, occasionally at the center, admits to the stair hall and the various rooms, generally two in depth, with often an addition to the rear of the main unit. The rooms are often large and high, with heavy molded trim of good design, plaster cornices, and restrained pilastered mantels of good proportion and scale. Inside blinds served in place of roller shades, behind the regularly spaced 12-pane windows. Generally the staircase is unornamented.

The churches of this stern classical tradition, usually of frame construction, continued the meeting-hall type of rectangular plan, with heavy cornice and high windows and pilaster-emphasized entrance.

Astride, or partially in advance of, the gable roof rose a square entrance tower in two or more stages, often terminating in a slender spire, as in the Baptist Church at Holly and the former Methodist Church (now the Music Hall) at Hartland. Sometimes a portico lent added dignity to the façade, and occasionally incongruous pointed openings were introduced in a design whose other details were classical, a combination that appears in St. Peter's Episcopal Church, Tecumseh. The Jesuit Church of SS. Peter and Paul at Detroit, a three-aisled basilican structure, was designed by Francis Letourno, one of Michigan's earliest-known architects.

The courthouse, the schools, the flourishing stores, the harness, wagon and blacksmith shops, most of which have vanished, and the grist mills were all shaped by the style in general character, details, and construction. What was probably the largest grist mill, at Clinton, is still operating, as are several others which have been rehabilitated by Henry Ford.

Pointed-arch Gothic architecture, introduced as early as the Greek into the United States but slow to be adopted generally, was well established by 1850 for ecclesiastical architecture. Soon after was built in Detroit the Fort Street Presbyterian Church, by O. and A. Jordan, Architects, of Hartford, Conn., and Detroit with traceried and colored windows, pinnacled buttresses, and a corner tower with a graceful and exceptionally high steeple. In this, as in nearly all Gothic churches of this period in Michigan, trussed-roof construction instead of stone vaulting was used. Evolved originally as an organic whole in stone, the great medieval style was frequently travestied in materials and design, and too often the ambitious church structure that should have been the noblest in the community was inferior to the earlier, more modest building it replaced. After an interlude of Romanesque architecture, the Gothic was reinstated and has since continued in favor. Representative of the later or Neo-Gothic is St. Paul's Episcopal Cathedral, Detroit, by Cram, Goodhue and Ferguson, Architects, the Central Woodward Christian Church by George D. Mason & Co., and Duns Scotus College by Wilfred E. Anthony.

The illustrated books on architecture that influenced the design of early buildings were gradually succeeded by others. A. J. Downing's *Country Houses*, published in 1830, ignores classical design and gives plans, elevations, and details for Gothic and Swiss cottages, Italian and Romanesque houses. In a romantic reaction from strait-laced formalism, Michigan like the rest of the country multiplied Gothic cottages and

houses having high roofs, gables with ornamental barge boards, diamond-paned casements, oriels and high chimneys, and prepared the way for the varied outlines of later houses. The above elements were incorporated in the R. G. Paine, later the Ring Lardner, house at Niles, and in the stone Sidney D. Miller house on Jefferson Avenue in Detroit, the latter designed by Gordon W. Lloyd.

Following the Civil War appeared adaptations of the revived English Queen Anne style, of the French Renaissance, and other modes. A novelty-seeking public and unqualified architects brought about so much mediocre composition and meretricious detail that the period has been called both the 'Age of Innocence' and the 'Reign of Terror.' Hand craftsmanship gave way before sawmill methods, and the scroll saw was used to produce exaggerated, superfluous, and costly ornament.

The redundant style of Mansart, architect of Louis XIV, revived in France by Napoleon III had the widest appeal at this time, and again countless imitations appeared, many of them in wood, painted and sanded to simulate stone. Michigan's most successful building in that mode is the Detroit City Hall, designed by James Anderson and completed in 1871. Of masonry and three stories in height, it has the truncated, pyramidal roofs of slate, bearing the iron cresting characteristic of the style. Illustrations in the residential field are the McCreery house, Flint, and at St. Clair the larger Hopkins house, of which Charles Marsh was the architect. This was the period of black walnut doors and trim and of walnut furniture. Marble mantels, ornamental cornices and center pieces of plaster, and pine floors covered with carpet were also typical features of the American adaptations. Another phase of the period was the cast-iron store front, anticipating prefabricated building units, as in the six-story Parker building, at Woodward Avenue and State Street in Detroit.

While the mansard vogue was still flourishing, Henry Hobson Richardson, a Boston architect who had studied in France, inspired a large following through his brilliant creations in the Romanesque, carried out with great vigor and originality. For nearly 20 years before 1893, there arose many public and private buildings, which with varying success echoed the round-arched massive Romanesque, their high roofs, relieved by towers, turrets, and dormers. In Michigan some of these buildings were of rock-faced masonry, others were of red brick with stone trim, frequently red sandstone from the Lake Superior region. The inside finish was usually of oak for the beamed ceilings, carved mantels, wainscoting, and other woodwork; exterior cornices almost

disappeared, and spirited, sharp-leaved carving in stone and wood, and handwrought iron of original design were employed. This robust style, whose deep reveals were not well adapted to commercial structures requiring a maximum light, contributed materially to progress; it brought direction and unity of effort out of the architectural chaos that followed the Civil War.

The old Lansing Post Office and the Cadillac Municipal Building, combining city office and fire station, are public works of this period. In Detroit, there are the granite Bagley Memorial Fountain by Richardson himself and, reflecting his influence, the First Presbyterian Church, with sturdy central tower and triple-arched portal with jambshafts, designed by Mason and Rice. The First Congregational Church, with soaring campanile and projecting porch, by J. L. Faxon of Boston, and the old chateau-like Art Museum, now shorn of its effective conical tower roofs, are also among the best-known works of Michigan's Romanesque period, which included some residences of free non-archeological design. Prominent among recent Romanesque churches are the St. Aloysius Church, Detroit, by Donaldson and Meier, an ingenious and unusual solution on a restricted downtown site, and the Fountain Street Baptist Church, Grand Rapids, Coolidge and Hodgson, Architects, a well-unified group design with memorial tower.

Anticipating the approaching Renaissance wave and one of Detroit's outstanding mansions of the early nineties is that of Colonel Frank G. Hecker, by Scott, Kamper and Scott, Architects. It is of limestone in the French Renaissance style of Francis I, which influenced Detroit residential design and brought into play medieval towers and roofs, combined with carved pilasters and panels of delicate Renaissance ornament.

The climax of European architectural inspiration came in 1893 in the World's Columbian Exposition at Chicago. The grandiose general scheme, unifying landscape, architecture, mural painting, and sculpture, was a revelation to the public and led to a country-wide adoption of the Classical and Renaissance styles, particularly in public buildings. The careful study of design evident in the Exposition buildings promoted the spread of the Classical and helped create a demand for good architecture. Among the outgrowths of the movement are the numerous and at times impressive banks throughout Michigan, whose façades and interiors are enriched with the Classical orders. Most representative of the Renaissance influence is Detroit's stately white-marble Public Library by Cass Gilbert, which embodies the spirit of

the Italian style in its exterior and setting, in the refinement of its detail, and in its use of colored murals and mosaics by distinguished artists. Other examples are the Detroit Institute of Art by Cret, Zantzinger, Borie and Medary, the MacGregor Library, Highland Park, by Tilton and Githins, and the Martin Ryerson Library, Grand Rapids, by Shepley, Rutan and Coolidge.

Little true progress was made by architecture until the rise of metallic construction, the most important technical development since ancient and medieval times. This construction, together with the new needs and resources of the industrial age, laid the foundation for new forms and modern architecture. As early as 1850, Europe was erecting significant buildings in which iron was employed structurally. Forty years later in the United States, steel, the elevator, and freedom from legal height restrictions made possible the skyscraper, America's outstanding contribution to architecture. Late in the nineteenth century, when American buildings of masonry had reached their economic height, iron and steel construction facilitated the intensive exploitation of urban land. Iron had been used conservatively for construction purposes, as in columns, and decoratively for the fronts of buildings, but there had been little progress in the design of structures for the rising tide of business until steel skeleton construction arrived. With steel, height and span could be extraordinarily increased, and in Chicago inspired architects not only inaugurated a new era of design and an organic architecture, but revitalized aesthetic theory and made fundamental contributions to the now world-wide range of buildings known as 'modern.'

With an unconvinced clientele, few architects attempted to make the implied synthesis of plan, structure and materials, form and site. Others continued to adapt traditional forms to buildings that functionally and technically were modern. Notwithstanding resistance, the new design has now spread to the smallest oil stations, to houses, furniture, and the last kitchen gadget, utilizing every known material and technique, and demonstrating the wide acceptance of the new movement. Side by side with the Gothic churches, Renaissance theaters, clubs, hotels, and apartments have appeared structures of varying degrees of modernism, a condition that will probably last until unified culture can produce a unified art.

In Michigan the modern movement has assumed various forms. Buildings may be a cubical mass, with a pattern of openings, or a steel-framed mass, with a gridiron of windows as a surface. The mass may

ostensibly be supported on stone or terra-cotta columns or arcades and be topped with a projecting cornice; on some a tower may rise, and in others outside courts provide lighting and vary the mass of the building. Lofty and fireproof, modern in plan, construction, and equipment, these structures retain all types of architectural detail, for the 'battle of styles' is not yet over, and only slowly are long-cherished forms relinquished for others that are expressive of our times and materials.

Of the more conservative modern buildings in Detroit, the Majestic Building, by Daniel H. Burnham, and the Buhl Building, by Smith, Hinchman and Grylls, employ Romanesque forms and detail in terra cotta with the steel framework. Renaissance and classical forms enrich the Grand Rapids National Bank, by Williamson, Crow and Proctor, the First National Bank Building, by Albert Kahn, and the David Whitney Building, by Graham, Anderson, Probst and White, in Detroit. A direct nontraditional design marked by geometrical masses and simple planes is the Central National Tower, Battle Creek, by Holabird and Root; this, like Detroit's Penobscot, Fisher and Stott Buildings, employs setbacks for purely aesthetic effect.

The modern trend gradually made itself felt in Michigan in other types of buildings. A reserved and early phase appears in the Detroit News Building, by Albert Kahn and Ernest Wilby, and in the University of Michigan Union Building, the Students' Union of Michigan State College, and the Whitcomb Hotel, St. Joseph, by Pond and Pond. Among buildings in which tradition is completely rejected are those of the Washtenaw Abstract Company, Ann Arbor, by Rousseau and McConkey, the Ann Arbor News, by Albert Kahn, Inc., the Fenton Community Center, by Eliel Saarinen, and the Northville School, by Lyndon and Smith. The new seven-story Federal Building, by Derrick and Gamber, the Naval Armory, by Stratton and Hyde, the Wardell Garage, by Marcus Burrowes, and the Deaconess Hospital, by Adolph Eisen, all in Detroit, have the same quality of independence.

Michigan has also made advances in educational and in other institutional buildings, in which good planning, sound construction, and varied facilities are required for the demands of intellectual and physical development and for the needs of the sick and the wards of the State. The design of these buildings ranges over a wide architectural field, often in a single institution. The greatest diversity is probably found at the University of Michigan, which began with the Greek Revival a hundred years ago, ran the gamut of styles, and returned quite literally to the classical in Angell Hall and, with great freedom

and in the Greek spirit, in the Rackham Graduate School. Until recently the largest degree of unity in design existed in the State Hospital for the Insane at Newberry, by Charlton and Gilbert; in this and the Eloise Hospital buildings, by Maul and Lentz, the style is Georgian, which also describes the Kalamazoo College Library, by H. H. Turner. Unique in Michigan as a harmonious and highly integrated design are the groups of buildings making up the Cranbrook and Kingswood Schools and allied structures, designed by Eliel Saarinen, who has utilized with them the sculpture of Carl Milles, the art of other craftsmen, and the beauty of landscape.

Contemporary design in the residential field of Michigan is largely Georgian; many of the houses reflect the rural styles of England and other modes. In this field, architects have produced many buildings distinguished by excellent planning, good general composition, and detail. The State's earliest dwellings of modern design are the Amberg and May residences, Grand Rapids; both have marked individuality and were designed as early as 1909 by Frank Lloyd Wright. At Midland a group of houses of analogous design was planned by Alden Dow, recipient of international recognition at the Paris Exposition in 1937.

Michigan's great economic expansion is reflected not only in commercial buildings but in industrial structures, in some respects the most original and modern of its buildings. Planned for the highest productive efficiency and for pleasing appearance, they are straightforward adaptations of form to function. Although economic requirements receive exacting attention, provision is made also for safe and hygienic working conditions. Many of the factories of a generation ago have been replaced by fireproof structures, in which a skeleton of reinforced concrete or steel columns and beams supports large areas of steel sash and a roof construction of very wide span, designed for unobstructed floor areas and for light and ventilation. The early Ford plant at Highland Park, of concrete, red brick and steel-sashed glass, and the recent Chrysler press building at Detroit, of steel and glass, are examples of the modern trend, as are the new buildings of the Detroit Steel Products Company, by Smith, Hinchman and Grylls, and the Consolidated Press Company's buildings at Hastings.

The housing of employees, which has at times accompanied the development of industry abroad, finds little parallel in Michigan. Gwinn, a mining town in the Upper Peninsula, built by the Cleveland Cliffs Iron Company, was in 1906 apparently the only community in the State consistently planned for its workers. Of great significance are

the extensive and recently completed Federal Housing projects in Detroit. The Brewster Area unit, consisting of two-story fireproof group houses, apartments, and shops, replaces a slum, and, like the Chandler Park Project, provided accommodations for a large number of families with low incomes. A planned community for workers was recently begun near Pontiac, through a gift from Senator James Couzens, of which the houses with an acre of land are to be sold at cost to workers.

The significance of the far-seeing city planning accomplished in Paris by Haussman under Napoleon III was not understood in Michigan 70 years ago, when other elements of French architecture were incorporated in its buildings. Thus far the outstanding instance of city planning in the State is the plan for the rebuilding of Detroit, presented by Judge Augustus B. Woodward after the calamitous fire of 1805. Inspired by L'Enfant's plan for the city of Washington, Detroit is indebted to it for the radial street scheme and the little parks included in the old central area below Adams Avenue, a section of the city that has an interest entirely lacking in the unimaginative gridiron pattern of the rest of the sprawling city that stretches for miles along the beautiful straits, or 'detroit,' which gave the city its name.



PART II

Cities

Ann Arbor

Railroad Stations: Depot St. at foot of State St. for Michigan Central R.R.; S Ashley St. between Williams and Jefferson Sts for Ann Arbor R.R.

Bus Station: W. Huron St near Main St. for Short Way, Blue Goose, Greyhound, and People's Rapid Transit Lines

Airport: Ann Arbor Airport, 4 m. S. of city on State Road.

City Busses. 3 tickets for 25¢

Taxis: 35¢ for one passenger anywhere in city; 50¢ for more than one passenger.

Traffic Regulations: Parking on campus limited to faculty cars; very strict rules against overtime and double parking in business sections; lights required for night parking; no turn on red light.

Accommodations: 6 hotels; rooming houses near campus, tourist homes on main highways, trailer parking space at Fair Grounds, Dexter Road, reached by W. Huron St The Michigan Union (for men), S. State St, and the Michigan League (for women), N. University Ave., are University of Michigan clubs, where transients may obtain accommodations upon introduction by members of the faculty or student body.

Information Service: Michigan Union, S. State St; Michigan League, N University Ave.; General Business Office, University Hall; Automobile Club of Michigan, 205 S. 4th Ave.

Theater and Motion Picture Houses: Lydia Mendelssohn Theater, Michigan League Bldg, N. University Ave, for dramatic productions, Hill Auditorium, N University Ave., for concerts and lectures, Main Auditorium, Rackham Bldg., for lectures, demonstrations, assemblies; 5 motion picture houses.

Swimming: Michigan Union, S State St, for both men and women; University Intramural Bldg., Ferry Field, E Hoover St, men and women; Municipal Beach, along Huron River, reached by Long Shore Drive.

Golf: University Golf Course, Stadium Blvd. near S. State St., 18 holes, greens fee, \$1; Municipal Golf Club, Fuller St, 18 holes, greens fees, 35¢ weekdays, 25¢ after 5 P.M., 50¢ Sun. and holidays, Ann Arbor Golf Club, E. Stadium Blvd. near S. Main St., 9 holes, greens fee, 50¢ for guests; Barton Hills Country Club, Country Club Rd., 18 holes, greens fee, \$1 for guests; Huron Hills Golf Club, Heatherway Dr, 18 holes, greens fees, \$1 weekdays, \$1 50 Sun and holidays, students and guests; Stadium Hills Golf Club, W. Stadium Blvd, 9 holes, greens fee, 50¢ days, 35¢ evenings, not restricted

Riding: Golf-Side Stables, E. Huron River Drive. Fritch Riding Academy, Dexter Ave.

Canoeing: Saunder's Canoe Livery, Huron River near Cedar St

Athletics University Football Stadium, S. Main St; Ferry Field, S. State St.; Palmer Field, Forest Ave.; Island Park, Cedar Bend Dr; West Park, W. Huron and S. Seventh St.; Burns Park, Wells St.

Annual Events: Annual J-Hop, Intramural Building, Feb 10; Students' Peace Conference, in April; May Music Festival (symphonic concerts, choral works, vocal and instrumental soloists), Hill Auditorium, in May; Ann Arbor Dramatic

Season (legitimate drama), Lydia Mendelssohn Theater, late May through early June; Commencement Exercises, Ferry Field, second or third Saturday in June; Alumni Reunion, second week in June; Alumni University, third week in June; Washtenaw County Fair, late August; football in season; Homecoming Day, usually in October, Annual Community Christmas Sing and Pageant, third week in December.

ANN ARBOR (802 alt., 26,944 pop.), on the Huron River, is the seat of Washtenaw County, the home of the University of Michigan, and the trading center of a large agricultural and fruit-growing region. The first impression created by Ann Arbor is one of Midwestern charm. It seems to be almost entirely composed of trim, shady, residential streets, some rising steeply out of the winding river valley toward the range of rolling hills in which Ann Arbor is set. Eighty-five per cent of the families here own their homes. The city is further individualized by the many university buildings and the presence, during most of the year, of thousands of students; these temporary residents, with their strenuous program of activities, both serious and lighthearted, and their easy and sometimes gay attire, spice Ann Arbor life.

A trading and commercial district, with a mixture of old buildings and modern stone and brick structures, occupies the center of the city. Touching its southeastern rim is the University of Michigan campus, which, with its surrounding buildings, fills a quarter-mile circle. Other university edifices are scattered for three-quarters of a mile to the northeast, where the high, buff-walled University Hospital towers above surrounding structures. In the southwest section are the university athletic fields and the stadium. The city's two industrial districts are scarcely noticeable to the casual observer. One parallels the railway angling through the western residential section, and the other, in the north-central area, is along the railroad that follows the Huron River.

In the construction of Ann Arbor churches, public buildings, and many houses, liberal use has been made of the varicolored field stones with which the countryside abounds. Steeples and schools and corner grocery stores give the west side the air of a rural community, with glimpses of the near-by hills at the end of almost every street. On Wednesdays and Saturdays, farmers drive in to sell their products at the open-air market and load their cars with a week's supply of necessities.

In the eastern part of the city, rearing their roofs above ancient trees, are auditoriums, experimental theaters, science laboratories, hundreds of spacious classrooms, libraries, recreation centers, the Law Quadrangle, fashionable shops, and specialty stores—almost a different world. Everyone is in a hurry to get somewhere: to lecture or library, game or concert, fraternity or 'date.'

The year in east-side Ann Arbor begins in autumn, with the reopening of classes. After the close of summer school, the campus section is deserted for four weeks. Then suddenly, from every point of the compass, students come thronging by airplane, train, bus, and motor car. Around the university campus live nearly 12,000 students, many of

whom earn all or part of their college expenses. Current players of the New York season bid for their attention, as do symphony orchestras, opera singers, and lecturers. Students take equal delight in callow horse-play and mature reflection. At an 'owl show,' an alarm clock may explode, shattering the tense moment of a romantic movie; some of the same students who attended the theater may be among the 'moderns' who meet in the Unitarian Church to discuss world affairs and argue weighty subjects. Vital student issues are fought on the editorial pages of the student newspaper, the *Michigan Daily*. At the Spring Parley, several hundred young men and women invite their professors to a platform for severe cross-questioning on all topics from sociology and economics to religion.

The interests of students have changed somewhat in recent years, here as elsewhere. Security, peace, and academic freedom are now the major preoccupations of the serious undergraduate. During the depression years, the tradition of freshman 'pot'-wearing was given up, and with it a picturesque ceremony wherein first-year men snake-danced around an immense bonfire and consigned their caps to the flames; this celebration, however, lately has been revived.

Student influence permeates the city, and the year is studded with events of student interest that have become firmly established in the life of the community. The Annual J-Hop, established in 1872 as a 'Junior promenade concert' by the class of '73, has become the outstanding university ball of the year. It is sponsored by the Junior class and is held in the gymnasium of the Intramural Building in February, at the start of the second semester. The Students' Peace Conference in April draws a large number to its Peace Day program; the May Music Festival, a four-day program of music and singing, has been part of university life since 1880, and is comparable in some ways with the Berkshire Festival. In May, also, is the Ann Arbor Dramatic Season, a series of productions at the Lydia Mendelssohn Theater, which carries over into early June. In June are the annual Commencement Exercises, with a tradition that goes back to the graduation of the first class in 1845. This event, usually held on the second or third Saturday of the month, attracts an average attendance of 13,000 persons, and, for this reason, the exercises are now held in the open air in Ferry Field. The Alumni Reunions are held during the second week of June, and the Alumni University in the third week. The Reunions, held the two days preceding Commencement, have been a part of the exercises since the early 1860's. Included in the program is a luncheon, in Waterman Gymnasium, tendered to the alumni by the university. The Alumni University, inaugurated in 1930, is a short course of lectures for those who attend the Reunions. In the third week in October, the football season opens with the pomp of a major holiday. On these autumn Saturdays the population is sometimes trebled, and the town presents a vivid pageant. At some date during this period each year is staged the annual Homecoming Day, a celebration for alumni. Winter brings

the annual Community Christmas Sing and Pageant, during the third week of December.

John and Ann Allen, from Virginia, and Elisha and Ann Rumsey, from New York, settled in the Michigan forest at Allen's Creek in 1824. According to tradition, they built an arbor and trained upon it the wild grapevines they found twining through the branches of a plum tree beside the creek. They named their settlement Anns' Arbor, in compliment to their young wives. A journal kept by James Turner Allen, and now in the Clements Library, corroborates this story.

Another account, given by David Hackett, a pioneer who returned to Ann Arbor in 1900 after an absence of 70 years, insists that the name refers to Ann d'Arbeur. 'Ann, the guide,' as she was known, was a young, frail, yet fearless and untiring woman who was a wilderness guide out of Detroit as early as 1813. When the route from Detroit westward became better known, and there was less need for a guide during the first part of the journey, Ann moved to a hillside above the Huron River and accompanied convoys from that point. Her life and her reasons for following this strange and lonely occupation were largely hidden in mystery. A partial explanation was given one day to a group of settlers who came to ask her to join their colony, across the river from her cabin. Ann led them to a grave near her home and exclaimed, 'Here lies all that is most dear to Ann d'Arbeur, and here shall she stay while life lasts.' She was killed by a falling tree two years later, and her entire story was never known; but Hackett asserted that the pioneers paid tribute to her memory by giving her name to the settlement on the river. Attempting to substantiate his statements, Hackett searched in the Huron River for a rock upon which settlers are said to have inscribed 'In memory of Ann d'Arbeur'; but his search was fruitless.

The Indians knew the settlement by another name. They called it Kaw-goosh-kaw-nick, from the sound of the gristmill Allen set up soon after he arrived. Other mills, a tannery, and a general store followed. The store was painted bright red and gave the spot where it stood—today the intersection of Huron and Main Streets, business center of Ann Arbor—the name, Bloody Corners, a title that survived the store.

Emigrants from Virginia and New York, and later from Ireland and Germany, came to the village. Ann Arbor was made the county seat in 1827, and the first court was held on January 25 of that year.

Ann Arbor was just 13 years old and its population less than 2,000 when it had the temerity to bid for the University of Michigan, an institution previously located in Detroit. The bid was successful. The deal was managed by a group of canny real-estate men, who foresaw a land boom following the establishment of the university and donated 40 acres to the State to help the cause. Ten years later, in 1847, Ann Arbor bid unsuccessfully for the State capital.

The university's contribution of young men to the battalions that left Ann Arbor for service at Gettysburg and Vicksburg was generous. The university president, Henry Philip Tappan, was chairman of the

committee that conducted recruiting. The response was as great in 1898. But patriotic fervor was never greater on campus and the city than just before American participation in the first World War.

Industrially Ann Arbor has had a checkered career. For many years organs and pianos were made here. A still earlier industry was the manufacture of watches. An automobile plant established in 1910 was unsuccessful. Notable among the industries that have survived and prospered are those producing baling machinery, steel balls, radios, and miniature cameras. The Bureau of the Census enumerated 51 industrial establishments in the city in 1937; these employed 2,500 persons, paid annual wages of \$3,000,000, and manufactured products valued at nearly \$15,000,000. Some residents are employed outside the city, chiefly in Detroit offices and factories; and the university, with nearly 4,000 persons on its pay roll, contributes to the city's economic good health. Housing students is one of the major businesses, although in the late 1930's a building program was inaugurated at the university to increase dormitory facilities.

In Ann Arbor is the main office of the Michigan Municipal League, a co-operative union of 141 cities and 137 villages organized in 1899. Designed primarily to improve local government and administration, the league is composed of the municipal corporations of cities and villages and is governed by a board of trustees elected at an annual State convention. Among its many services are community planning, centralized purchasing, electric utility advice, systematized accounting, legal counsel, and personnel service. It publishes a monthly bulletin, the *Michigan Municipal Review*, and maintains legislative contacts at Washington and Lansing.

UNIVERSITY OF MICHIGAN

The University of Michigan at Ann Arbor originally was confined to a 40-acre, east-side campus bounded by State Street, and North, East, and South University Avenues, but has since grown concentrically around the original site. Some of the largest and finest buildings stand in almost solid frontage on and adjoining the Old Campus; others are some distance away. Aged trees shade the campus.

The oldest and largest complex of State institutional buildings, erected over a period of 100 years and evolving with changes in teaching needs and in growth, the structures demonstrate the eclecticism of American architecture. Classical Revival, Richardsonian Romanesque, Gothic, Georgian, Italian and French Renaissance, conservative modern and industrial types, as well as hybrids, are represented.

Of the buildings, widely scattered and hemmed in by the growing city, the central groups are given a sense of order by the open space within the old campus and by a mall, part of the campus plan of 1907 prepared by a professor of architecture; the mall extends from the main library, at the southern end of the axis, between the Chemistry and Natural Science Buildings on the old campus, across North University

Avenue, and past Hill Auditorium, the Burton Memorial Tower, and the Women's League, to the Rackham Graduate School on the north.

Although the university was founded in 1817 in Detroit, it did not offer a college curriculum until 1841, when it was reorganized and opened in Ann Arbor. It was actually only a preparatory school until this move was made. Through the efforts of a group of public-spirited citizens, led by Judge Augustus B. Woodward, Governor Lewis Cass, and William Woodbridge, a charter was obtained from the territorial legislature in August 1817 for the University of Michigan. Uniting to form its first faculty were the co-instigators, the Reverend John Monteith, a Presbyterian minister, and Father Gabriel Richard, a Roman Catholic priest.

With the admission of Michigan into the Union in 1837, the State legislature directed the transference of the university to Ann Arbor. At first its affairs were directed by a board appointed by the governor, but after 1850 regents were chosen by the electorate. In 1841, following the completion of Mason Hall, the College of Literature, Science, and the Arts opened its doors to six freshmen, one sophomore, and two professors. Ten years later the enrollment reached 154.

The university was nonsectarian, and, although the faculty in the early years consisted almost entirely of ministers, an attempt was made to give each denomination equal representation. Between 1841 and 1852, the institution had no president. With the appointment of Henry Philip Tappan, who served as president between 1852 and 1863, the present broad and liberal policies were inaugurated. The introduction of a scientific course broke the hold of the old classical curriculum. The policy of allowing a limited number of electives was inaugurated. During this period the Observatory was built (1855) and the Chemical Laboratory established (1857), the first at any State university.

Dr. Tappan's successor, Erastus Otis Haven, did much to improve university finances during his presidency (1863-9). For years the school had suffered from lack of funds, but the legislature in 1867 granted it an annual allotment from the State treasury. Coeducation was introduced in 1870, early evidence of the institution's liberality and vigor. However, according to a committee report, there were those who 'insist that to admit ladies to the University would be . . . destructive to its character and influence, and ruinous to the ladies who might avail themselves of it.' Under President James Burrill Angell's administration (1871-1909), many new buildings were erected, three new colleges were opened, provision was made for graduate work and summer study, and the first professorship in education and the first course in forestry in any American university were established.

The university was quick to broaden its curriculum from the original arts college to a variety of modern 'practical' schools and departments, including Medical (1850), Law (1859), Dentistry (1875), Pharmacy (1876), Engineering (1895), Architecture (1906), Education (1921), Business Administration (1924), Forestry and Conservation (1927),

and Music (1929). Other important events were the establishment of special funds for faculty research, engineering and cancer research, scholarships for Oriental women (Levi B. Barbour fund), and pernicious anemia research (Thomas Henry Simpson fund).

In 1909 the enrollment was approximately 5,000, but this grew to 9,000 in 1919 and to 12,000 in 1924. The university's facilities were sorely taxed, but generous appropriations from the State, amounting to almost \$10,000,000 in the years between 1917 and 1924, supplemented by the gifts of alumni and friends, relieved the situation. More than 20 buildings were erected in the administrations of President Harry Burns Hutchins (1909-20) and President Marion Leroy Burton (1920-25). Additional gifts have swelled the university's holdings to more than \$55,000,000, and its budget approximates \$9,000,000 annually; of this, \$6,500,000 is allotted to the university proper and \$2,500,000 to the hospital. The State supplies about \$4,600,000 of the annual budget.

In addition to its broad educational activities, the university fosters important research work. The first notable accomplishments in this field were those of Dr. Franz Brunnov, its first professor of astronomy, whose computations were well known in their day. His pupil, James Craig Watson, became famous as the discoverer of asteroids. Contemporary with Watson was Moses Coit Tyler, whose researches in early American literature resulted in four monumental volumes. The work of Thomas McIntyre Cooley on constitutional limitations in law and of Henry Carter Adams in economics brought fame to them and to the university. More recently the late Professor Claude H. Van Tyne's historical research, the activities of the Department of Physics under the direction of Professor Harrison M. Randall, Professor Moses Gomberg's chemical discoveries, and Professor Henry A. Sander's critical work upon Biblical texts are examples of the type of research carried on by Michigan professors.

The university performs more than 50 distinct services to the State, notably in connection with the various sociologic, scientific, and administrative departments. The policy of admitting students on their high school diplomas began in 1870, thereby inaugurating the system of inspecting and accrediting high schools. Shortly afterward the Pasteur Institute, furnishing treatment for rabies, and the Hygienic Laboratory, performing analyses of public water supplies, were instituted. Fundamental scientific investigations applicable to industrial problems are carried on by the Department of Engineering Research as another service to the State.

Thirteen schools and colleges and a summer session comprise the present educational scheme. A newer development is the Extension Division, the 13 bureaus of which administer diverse types of adult education. In 1938-9 the total university enrollment was 17,297, including 11,475 in regular sessions, the faculty, 813, making Michigan fourth in size among State universities and fifth among all American

educational institutions. Living graduates and nongraduates, distributed through the 48 States, possessions, and 67 foreign countries, numbered 92,000 in 1938.

CAMPUS TOUR

Unless otherwise stated, all buildings are open during school hours.

S. from N. University Ave. on State St.

1. ANGELL HALL, S. State St. (L), with three-story Greek Doric colonnade, houses the College of Literature, Science, and the Arts, and contains offices of the president, regents, and summer session. It was erected in 1925 from a design by Albert Kahn of Detroit and named for a former president of the university, James B. Angell. The Department of Astronomy has a student observatory on the fifth floor.

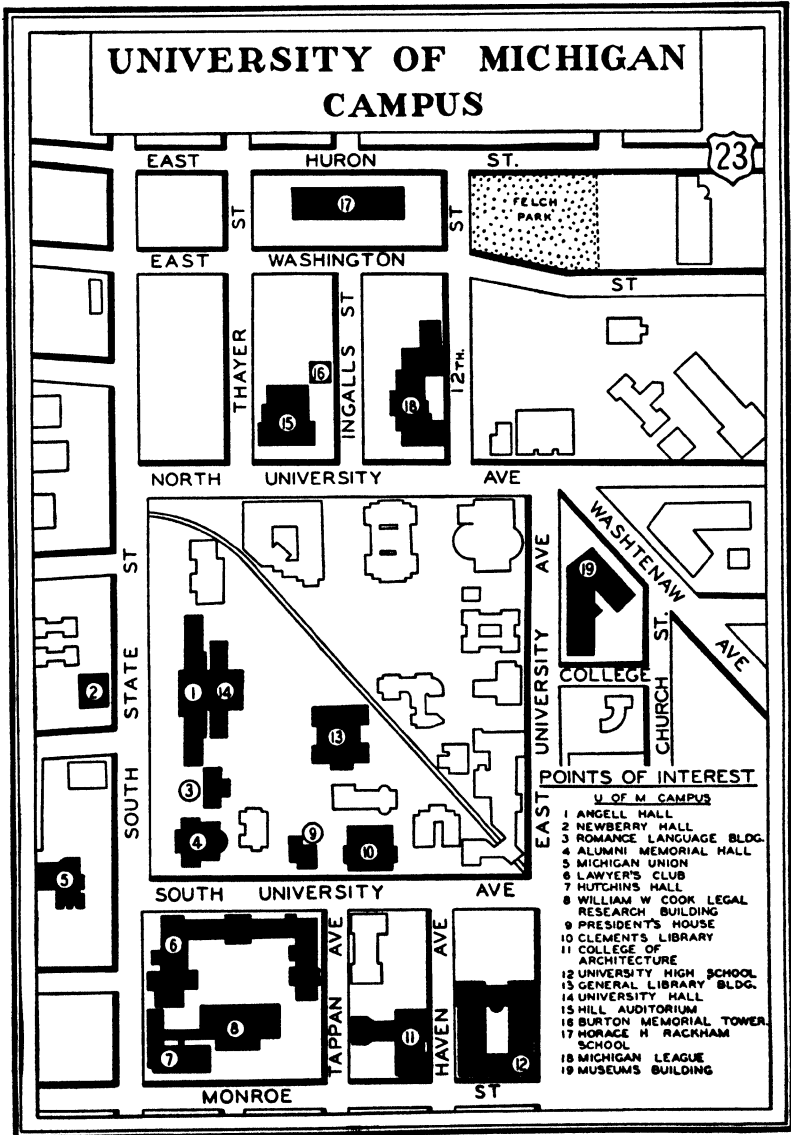
2. NEWBERRY HALL, S. State St. (R) near E. Jefferson St., Romanesque in style, was originally built for student Y.M.C.A. and Y.W.C.A. work. These groups later formed the Students' Christian Association. The building now has classrooms, lecture halls, an auditorium, and the MUSEUM OF CLASSICAL ARCHAEOLOGY (*open mornings 9-12 Tues.-Sat., afternoons 2-5 Mon.-Fri.*). Spier and Rhons were the architects.

3. The ROMANCE LANGUAGE BUILDING, S. State St. (L), was the Museum until the completion of the present building. Designed by William Lebaron Jenney, active as professor of architecture between 1876 and 1877, it was completed in 1880. Professor Jenney later became famous as the originator of the principle of metal frame construction, leading to the modern skyscraper, through his design of the Home Insurance Building in Chicago.

4. ALUMNI MEMORIAL HALL (*galleries open 8-5 on school days*), S. State St. (L), with its massive classical façade, was completed in 1909 from the design of Donaldson and Meier of Detroit. This building houses the general offices of the Alumni Association and the Fine Arts Department. It contains the most important of the art objects owned by the university, including the fine bronze reliefs of President Tappan and President Angell by the late Karl Bitter, and the original marble statue, *Nydia*, by Randolph Rogers. The DeCriscio collection of original Greek and Latin inscriptions is in the basement of the building.

5. MICHIGAN UNION, S. State St. (L), men's club house, was completed in 1920 at a cost of \$1,600,000, mainly contributed by more than 15,000 students and alumni. It includes lounges, dining rooms, committee rooms, ballroom, cafeteria, reading room, billiard room, bowling alley, swimming pool, and rooms for 287 transient guests. The exterior with its beautiful tower, the design of the interior, the details and the original and significant ornament consistently carry out the individual and nontraditional architectural and decorative theme. Two alumni, I. K. Pond and A. B. Pond, of Chicago, were the architects. The Union was conceived as a social center and as part of a larger group; dormitories are now being built in general harmony with the original structure of red brick with stone trim.

The LAW QUADRANGLE, bounded by S. State and Monroe Sts., Tappan and S. University Aves., is the gift of a New York alumnus, the late William W. Cook. It is unusual in providing teaching, research, living, and social facilities for the students of one profession in structures all grouped about an extended court. English Medieval in general



conception and introducing a new color to the campus, the group has the great merit of being architecturally concordant. The English Gothic of the Dining Hall (1924), the Legal Research Building (1931), and Hutchins Hall (1933) blend happily with the Elizabethan of the Lawyers' Club (1924). Massachusetts granite and Indiana limestone trim is used for and unifies all the exteriors. York and Sawyer of New York were the architects.

6. The LAWYERS' CLUB, extending along S. State St. and S. University and Tappan Aves., includes a refectory, club building, and dormitories. The roof of the spacious dining hall is supported by heavy hammer-beam oak trusses, ornamented with carved heads of famous jurists; amber cathedral glass is set in the tracery of the windows and the floor is of Missouri and Tennessee marble. The club space comprises lounge, guest, and recreation rooms and is adjoined by the dormitories accommodating about 300 law students.

7. HUTCHINS HALL, S. State and Monroe Sts., bearing the name of former President Harry B. Hutchins, is the Law School building. Four stories high, the building is devoted to classrooms, practice courtrooms, study rooms, and administrative offices.

L. from S. State St. on Monroe St.

8. The WILLIAM W. COOK LEGAL RESEARCH BUILDING (*open 8-6 and 7-10 weekdays*), Monroe St. (L), faces north across the inner court of the quadrangle, directly opposite the main tower of the Lawyers' Club. The largest and most elaborate of the structures, buttressed and four-towered, its chief feature is its well-appointed reading room, 242 feet in length and 50 feet high, expressed on the exterior by stone-traceried openings of large size.

L. from Monroe St. on Tappan Ave.

9. The PRESIDENT'S HOUSE, at the foot of Tappan Ave. on S. University Ave., is the oldest building on the campus, only survivor of the four modest two-story professors' houses built in 1840. Owing to alterations and additions, there is slight resemblance to the original Greek Revival house, of which the front porch alone remains unchanged.

R. from Tappan Ave. on S. University Ave.

10. The CLEMENTS LIBRARY OF AMERICAN HISTORY (*open to casual visitors 2-5 weekdays, 3-5 Sun.; to readers 8:30-5 weekdays*), S. University Ave. adjacent to the President's House, designed in the style of the Italian Renaissance by Albert Kahn, contains one of the world's most important collections of books, manuscripts, maps, and newspapers relating to early American history. One of the aims of this library is to have on its shelves only those books that have exerted genuine influence on the pattern and direction of American culture. *The Day of Doom*, for example, written by the Reverend Michael Wigglesworth and published in Boston in 1751, of which the library possesses a rare copy, is a key volume to understanding the 'Puritan

conscience' that for 300 years has been an integral part of American life. This library was opened in June 1923, the gift of the late William L. Clements of Bay City, a former regent of the university and owner of a famous collection of manuscripts relating to the American Revolution.

R. from S. University Ave. on Haven Ave.

11. The COLLEGE OF ARCHITECTURE BUILDING (*open 8-5 weekdays*), Haven and Monroe Aves., was designed by Professor Emil Lorch and associates and completed in 1927. In addition to class and drafting rooms and studios, it houses a special library and artistic objects of various kinds. The ARCHITECTURAL GARDEN contains fragments of old buildings, stone embellished with carvings, including part of the entrance of the old Detroit post office building, demolished in 1931, and the entrance of the First National Bank building, erected in 1836 in Detroit.

L. from Haven Ave. on Monroe Ave.

12. The UNIVERSITY HIGH SCHOOL BUILDING, Monroe and E. University Aves., designed by Perkins, Fellows and Hamilton of Chicago in 1923, houses the School of Education. With the addition of the ELEMENTARY SCHOOL (1930), designed by Malcomson, Higginbotham, and Trout of Detroit, all grades from the infant school through the college preparatory school are available for study by the university's education students.

L. from Monroe Ave. on E. University Ave.; L. through arcade of Engineering Building on Diagonal Walk through Campus.

13. The GENERAL LIBRARY BUILDING (*open 7:45 A.M.-10 P.M. weekdays, 2-9 Sun.*) stands on the site of the library building erected in 1883. It was designed by Albert Kahn and completed in 1918. The library contains nearly 700,000 volumes, with 400,000 more volumes in various departmental branches. Special collections include more than 6,000 listed items of Greco-Egyptian papyri, Persian and Arabic manuscripts once owned by Sultan Abdul Hamid, the Parsons Library of Political Science (6,076 volumes), the Goethe Library (1,131 volumes), the McMillan Shakespeare Library (6,525 volumes), the Lewis S. Pilcher gift of old works in medicine, the Ernest W. Haass Collection of Medical Incunabula, and the Hubbard Collections of *Robinson Crusoe* and *Imaginary Voyages*. The Labadie Collection of Economic Literature contains 5,000 rare books, pamphlets, leaflets, papers, manuscripts, and letters bearing on the American labor movement.

14. UNIVERSITY HALL (L) consists of a main building, erected in the French Renaissance style in 1873, and two wings, originally separate buildings. The north wing, built in 1841, is known as MASON HALL in honor of the first governor of the State, Stevens Thompson Mason. The SOUTH WING, originally called South College, was erected in 1849. University Hall houses administration offices of the university. In the main corridor of the lower floor, which enters the basement of Angell

Hall, is the Roger's door, the original design and model for the door of the Capitol at Washington, D. C.

The STUDENT PUBLICATIONS BUILDING, 420 Maynard St., is unique in Michigan in housing student journalistic activities in a structure financed by funds earned by these student publications. Architects, Pond and Pond.

R. from Diagonal Walk on N. University Ave.

15. HILL AUDITORIUM, N. University Ave. between Thayer and Ingalls Sts., designed by Albert Kahn and Ernest Wilby, was erected in 1913 with funds largely contributed by Arthur Hill, an alumnus and former regent. It seats about 5,000 and is equipped with the Frieze Memorial Organ, constructed for the World's Fair of 1893; it also contains the STEARNS COLLECTION OF MUSICAL INSTRUMENTS, more than 1,000 items from all parts of the world. The School of Music maintains the University Choral Union, a group of 350 voices, and sponsors vocal, symphonic, and other programs throughout the school year. Greatest of its enterprises is the May Music Festival, a series of six concerts, in mid-May.

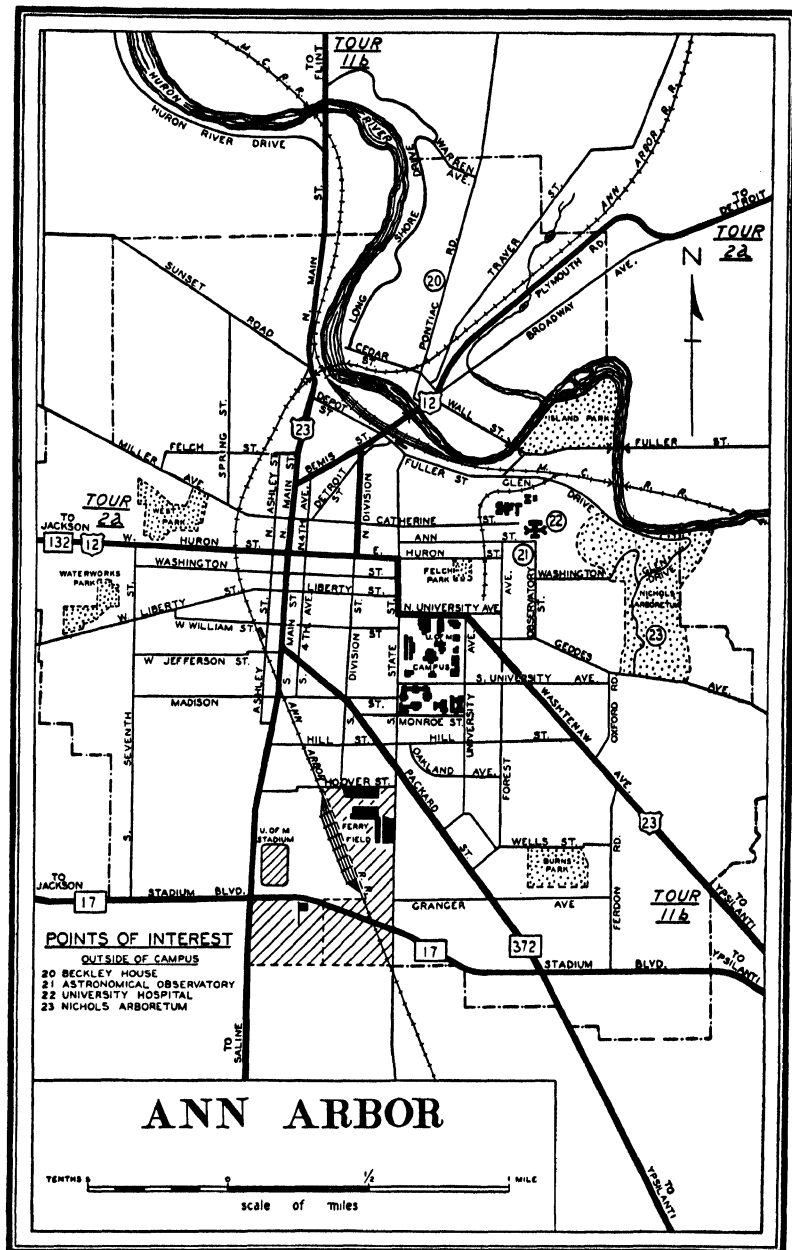
L. from N. University Ave. on Ingalls St.

16. BURTON MEMORIAL TOWER, Mall at rear of Hill Auditorium, commemorating the late Marion Leroy Burton, president of the university from 1920 to 1925, was designed by Albert Kahn, Inc., and completed in 1937. Built of stone, it is in marked contrast in color and design with the dark brick and terra cotta of Hill Auditorium. On the tenth floor is the 53-bell CHARLES BAIRD CARILLON, one of the largest in the United States. The floors below are used as music studios by the School of Music.

17. The HORACE H. RACKHAM SCHOOL OF GRADUATE STUDIES, on E. Washington St. at north end of Mall, a monumental, modern classic structure designed by Smith, Hinchman, and Grylls of Detroit, was completed in 1938 at a cost of \$2,400,000. Designed primarily as a meeting place for graduate students to exchange ideas in various fields of research, it contains lecture halls and rooms for reading, study, discussion, and conference, together with facilities for research groups and other graduate organizations. Among the most interesting departments is the Institute for Human Adjustment, which undertakes to apply the findings of science to personal problems. The MICHIGAN HISTORICAL COLLECTIONS (*open 9-12 and 2-5 Mon.-Fri.*), in rooms 156-64, contain letters of State and university officials and items relating to Michigan pioneers and pioneer life.

R. from the Mall on E. Washington St.; R. on Fletcher Ave.

18. The MICHIGAN LEAGUE, east side of Mall opposite Burton Tower, is a clubhouse for women similar in scope to that of the Michigan Union for men and, like that building, was designed by Pond and Pond. It has beautifully appointed lounges, cafeteria, dining room, meeting rooms, overnight accommodations for members and guests, and an



auditorium known as the LYDIA MENDELSSOHN THEATER. The Ann Arbor Dramatic Season is held in the auditorium each spring, bringing to Ann Arbor a parade of notable stage stars in current plays, which attract large audiences from the whole of southern Michigan. Art exhibits are held from time to time in the halls of this building.

L. from Fletcher Ave. on N. University Ave.

19. The MUSEUMS BUILDING (*open 8-5 weekdays, 2-5 Sun. and holidays*), at the triangular intersection of N. University and Washenaw Aves., was opened in 1928. The structure, designed by Albert Kahn in a modern adaptation of Renaissance, houses anthropological and paleontological collections and the HERBARIUM, which contains 300,000 plant specimens of the Western Hemisphere. Three-and-a-half floors are occupied by a MUSEUM OF ZOOLOGY, which has more than 3,500,000 specimens. The prime object of the exhibits is to illustrate, simply and directly, evolution (second floor), Michigan fauna (third floor), and biological facts and principles (fourth floor). Important also are the Stevens Oriental Collection and the Chinese Government Exhibit from the New Orleans Exposition.

OTHER POINTS OF INTEREST

20. The BECKLEY HOUSE (*private*), 1425 Pontiac Road, was built by the Reverend Guy Beckley between 1842 and 1845. An example of Greek Revival architecture, it has walls 16 inches thick on the first floor, constructed of field stone and bonded and veneered with bricks handmade locally—rare construction details in a house of this style. During a recent reconstruction, the missing front porch was rebuilt and a side porch added, the original appearance being otherwise restored. In this house, the Reverend Mr. Beckley devoted his time and energy to the publication of his antislavery *Signal of Liberty* and to the 'underground stations.'

21. The ASTRONOMICAL OBSERVATORY (*open 3:30-4:30 Mon.-Fri.; occasional visitors' nights*), Observatory and E. Ann Sts., opened in 1855, has facilities for modern astrophysical research. The equipment includes two large telescopes, one of the reflector type with a 37 $\frac{5}{8}$ -inch aperture; measuring machines; calculating machines; a Mill recording microphotometer; and many other instruments. A seismographic record has been kept since 1909. In connection with the distinguished work of the university's astronomy department, first headed by Dr. Franz Brunnnow, an observatory is also maintained at Bloemfontein, South Africa, as is the important McMath-Hulbert Observatory at Lake Angelus near Pontiac, Michigan.

22. The UNIVERSITY HOSPITAL E. end of E. Ann St., is a well-equipped institution with a capacity of 1,312 beds. Primarily founded as a clinical teaching center for university medical students, it also renders medical and surgical service to 30,000 patients yearly, most of whom are State wards. Constant research is added to the strenuous

teaching and treatment assignments of the entire hospital personnel, in order that both instruction and medical practice may reflect the most progressive thought. The number of persons treated makes possible the maintenance of many departments furnishing specialized services; patients admitted to the diagnostic unit pass from one medical service to another, until a complete diagnosis has been made.

To the west of the eight-story main building, which was opened in 1925, are the wards of the convalescent hospital. In the rear of this group, connected to it by a glassed-in corridor, is a four-story building exclusively for maternity cases. North of the main building is the contagious pavilion, given by the city. Residents of Ann Arbor who have contagious diseases are cared for at regular hospital rates. The University Hospital has achieved distinction in many departments, but none attracts more interest than its work among crippled children, which has been encouraged by the Rotary and Kiwanis clubs of the State. In connection with this physiotherapy work, there is a playground on the roof and a swimming pool at the rear of the hospital. The institution also renders a diagnostic service to Michigan physicians. 23. The NICHOLS ARBORETUM (*open always*), main entrance on Geddes Ave. and Glen Drive, consists of 90 acres of forested hills and valleys. It is controlled by the Department of Landscape Design and serves as an exhibition, demonstration, and practicing laboratory of plant materials and gardening. Here in mid-June bloom 350 varieties of Chinese and Japanese peonies—one of Ann Arbor's many beautiful gardens.

POINTS OF INTEREST IN ENVIRONS

Saline Valley Farms, 17 m. (*see Tour 1*); Whitmore Lake, 9 m. (*see Tour 11*).

Battle Creek

Railroad Stations: Main and Hall Sts. for Grand Trunk Ry.; W. Van Buren St., between Capital Ave and McCamly St., for Michigan Central R.R.

Bus Station: Union Bus Station, 15 Arcade Bldg., 51 W. Jackson St., for Greyhound, Blue Goose, Great Eastern, Short Way, People's Rapid Transit, Indian Trails, and Fort Wayne-Kalamazoo Lines

Airport: W. K. Kellogg Airport, W. Territorial Road at Helmer Road, 3½ miles SW. from center of city, for American Airlines, taxi fare 55¢, time 12 min.

Taxis: 25¢ for any trip within city; extra passengers, 15¢.

Urban Busses: Cash fare, 10¢; tickets 3 for 25¢, 7 for 50¢, and 15 for \$1; children's tickets, 20 for \$1.

Traffic Regulations: U-turns prohibited at Michigan-Capital and Michigan-McCamly intersections. No turn on red light.

Accommodations: 5 hotels; boarding houses, tourist homes, and tourist camps

Information Service: Chamber of Commerce, 23-5 N. McCamly St., Automobile Club of Michigan, 15 N. McCamly St.

Radio Station: WELL (1420 kc)

Theaters and Motion Picture Houses. W. K. Kellogg Auditorium for concerts and lectures; 6 motion picture houses

Swimming: Municipal Beach, Willard Park on Goguac Lake, Municipal Recreation Bldg., Garfield Ave. at West St.

Golf: Municipal Golf Course (operated on lease by American Legion Post), Bailey Park: 18 holes, greens fee, 50¢. Riverside Country Club, S of city limits, near Riverside Drive at E end of Columbia Ave 18 holes; greens fee, 50¢ Marywood Country Club, 4 miles N. of city on North Ave, near St. Mary's Lake 18 holes; greens fees, 50¢ weekdays, 75¢ Sat, Sun, and holidays

Tennis: City tennis courts, Bailey Park, Capital Ave. SE.; Piper Park, Capital Ave. NE. at N. Broad St; Kellogg Park, W. of Kellogg Co Plant

Riding: Battle Creek Saddle and Hunt Club, Riverside Drive, S of city limits.

Annual Events: Easter Egg Hunt, for children under 14, Leila Arboretum, W. Michigan Ave and 20th St, late April; Army Troops Training, Fort Custer, May 15-August 30; Horse Show, Battle Creek Saddle and Hunt Club, last Saturday in May or first Saturday in June; W. K. Kellogg Plaza Party, W. K. Kellogg Auditorium, W. Van Buren and McCamly Sts, mid-June; Organized Reserve Corps Training, Fort Custer, June 15-July 30; Reserve Officers' Training Corps Maneuvers, Fort Custer, June 15-July 30; Citizens' Military Training Camp, Fort Custer, for a month starting in July; Flower Show, Battle Creek Dahlia Club, in September.

BATTLE CREEK (885 alt., 43,573 pop.), the 'health city,' built at the confluence of Battle Creek and Kalamazoo River, has the aspect of a metropolitan center. The principal thoroughfare is Michigan Avenue, which runs east and west, its eastern segment on US 12 and US 12A. Capital Avenue, the other chief shopping street, extends to the

southwest and northeast. The most attractive residential sections are north of the river, between the business district and the city limits. In the eastern section are small settlements of Poles, Italians, Russians, Croatians, and Hungarians. Negroes, comprising 4.1 per cent of the total population, live in the district bordering the river lowlands.

Battle Creek's 74 industrial establishments employ an average of 8,000 workers, who receive a total annual wage of approximately \$11,000,000. Along the river and creek are plants that manufacture gas stoves, printing presses, metal stampings, harvesting and threshing machinery, and various other products. Chief industry is the production of breakfast foods, in which Battle Creek surpasses any other city in the Nation. The influence of C. W. Post (1854-1914) and Dr. John H. Kellogg (b.1852), health exponents and manufacturers of cereals, pervades the city. The names of these two men stand out on billboards, office buildings, public conveyances, and philanthropic institutions. Battle Creek's preoccupation with health foods and drinks and health teachings and practices is emphasized at intervals throughout the day, when an announcer at the local radio station intones: 'This is Station W-E-L-L, Battle Creek.'

Battle Creek had its genesis in the settlement of Milton, established in 1831 by Samuel Guernsey of New York State. When a post office was acquired in 1833, Milton was renamed for near-by Battle Creek, which had been so designated because of a 'battle' on its banks in 1825 between an Indian and a land surveyor. By 1849, Battle Creek had 993 inhabitants. The settlement was chartered as a village in 1850. When city incorporation was effected in 1859, an attempt to change the community's name to its Indian equivalent, Waupakisco, was frustrated. Among those who preferred the Indian name was Erastus Hussey, one of the founders of the Republican party and a nationally prominent abolitionist in the years immediately preceding the Civil War, when Battle Creek was an important station on the Underground Railroad. Battle Creek's activities on behalf of runaway slaves were not precisely underground. The sentiments of the inhabitants were such that slaves could have been escorted through the town to the accompaniment of a brass band and a hallelujah chorus without fear of arrest.

Principles that were to shape and direct the development of Battle Creek were introduced to Michigan in 1849 when Captain Joseph Bates, formerly a shipmaster of New Bedford, Massachusetts, founded a Seventh Day Adventist Church at Jackson. Converts were won at Battle Creek, and in 1855 the headquarters and the printing house of the denomination were moved here from the East. *The Review and Herald*, the church organ, was published under the direction of James White, a descendant of Peregrine White, first child born in the Pilgrim Colony at Plymouth Rock.

The teachings of the Seventh Day Adventist Church, which had been founded in New Hampshire in 1844, stressed temperance and, significantly for Battle Creek, health reforms. Although its members

were quiet, sincere people, they were at first mildly ridiculed by town rowdies, who called them Gizzardites and dismissed their proselytizing as the activity of harmless fanatics. Nevertheless, by 1863, their work had expanded sufficiently to necessitate the organization of the General Conference of Seventh Day Adventists. Today the General Conference Committee, the governing body of the church, is composed of some 150 representatives from all parts of the world.

The Western Health Reform Institute, first of the Seventh Day Adventists' world-wide systems of sanatoria, hospitals, and medical dispensaries, was built at Battle Creek in 1866. Battle Creek College, the denomination's first training school for adult youth, was established in 1874; now named the Emmanuel Missionary College, this institution was moved to Berrien Springs (*see Tour 15*) in 1901. *The Review and Herald* printing house and the General Conference offices were moved to Washington, D. C., in 1903. Battle Creek, however, still has the largest congregation in the Seventh Day Adventist Church.

Dr. John Harvey Kellogg, son of an Adventist pioneer, took charge of the Western Health Reform Institute in 1876, at which time the name was changed to the Battle Creek Sanitarium. He not only made the sanitarium widely known in succeeding years, but also contributed much to dietetics and invented valuable medical and surgical appliances. The electric light bath, a Kellogg invention that has largely replaced Turkish baths, is used by major hospitals throughout the world; his Universal Dynamometer, an instrument for determining the strength of the principal groups of muscles in the body, is used by the United States Army and Navy. The methods and machines for processing foods, which Dr. Kellogg perfected in his work at the sanitarium, promoted the development of a score of cereal and nut-food products.

C. W. Post, after benefiting from treatment at the Battle Creek Sanitarium in 1891, became convinced that cereals were the key to well being. To propagate his conviction he established La Vita Inn. Here he served to a clientele, consisting largely of persons of delicate health, a warm cereal drink, which he began to manufacture extensively in 1894 under the name of Postum. So successful was the sale of this product that, by 1905, Post had become one of the foremost advertisers in the country.

Another health venture had meanwhile been launched in Battle Creek under the direction of Neil Phelps, who founded a sanatorium to compete with the sanitarium. When the enterprise failed, Post bought the sanatorium and placed it under the management of Bernarr Macfadden. But Macfadden also failed, and the property was finally acquired by the Kellogg interests.

In the late 1920's, W. K. Kellogg, brother of Dr. J. H. Kellogg, established the Kellogg Foundation at Battle Creek. This organization has earned world-wide recognition for its county health program, begun in 1930. Health groups from China, Japan, Italy, France, Russia, and England have visited the Foundation to study its methods and practices.

POINTS OF INTEREST

1. The **KELLOGG FACTORY** (*open 8-4 weekdays*), Porter St. near Rock St., N. of E. Michigan Ave., consists of 15 buildings, varying in size from the two-story administration building to the six-story cereal plant and containing 35 acres of floor space. In its vast rooms, visited by 40,000 persons annually, uniformed men and women are stationed along lines of conveyors, transforming millions of bushels of wheat, corn, rice, salt, sugar, malt, barley, and other ingredients into breakfast cereals. Instead of the conventional 8-hour day with a lunch period, Kellogg employees have a 6-hour day and an 18-minute rest period.

Adjoining the factory is a 40-acre **PARK AND BOTANICAL GARDEN**, with fish ponds, an illuminated fountain, a fully equipped playground for boys and girls, wading pools, tennis courts, volleyball courts, and three softball fields. One of the near-by buildings contains an auditorium, in which many of Battle Creek's festivals are held in winter.

2. The **POST PRODUCTS FACTORY** (*open 9-4 weekdays*), Cliff and Academy Sts., is the manufacturing plant of the Post Products Division of the General Foods Corporation. Comprising 32 buildings, the plant manufactures breakfast cereals and other nationally advertised Post products. The original plant, built in 1895, still stands. Three new structures were added in 1937.

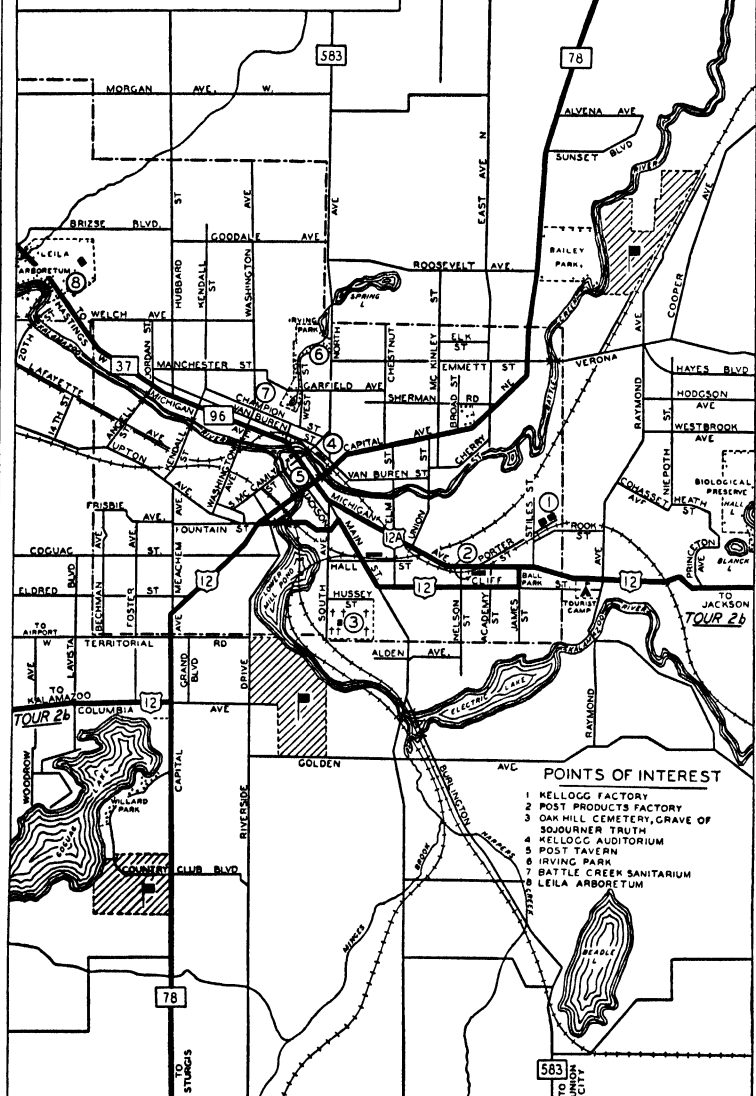
The attractively landscaped grounds have a 9-hole miniature golf course. The **CLUBHOUSE**, of English half-timber design, houses the private art collection of the late C. W. Post, and contains a large ballroom, recreation and lounge rooms, and a dining salon for the accommodation of visitors.

3. In **OAK HILL CEMETERY**, South Ave. and Hussey St., is the **GRAVE OF SOJOURNER TRUTH**. The grave, in the cemetery's Fifth Street, is marked by an old-fashioned square monument, simply inscribed with the name and the date of death. Although Sojourner Truth, one of the foremost Negro women in American history, died in 1883, scores of pilgrimages are made each year to her humble grave, almost within the shadow of the great marble mausoleum where rests C. W. Post. Born sometime shortly after 1790, this woman, who was six feet tall, gained her freedom from bondage in New York State in the early 1820's, dropped her given name and started westward on a 'sojourn to preach truth.' Her crusade against slavery took her into tiny halls and spacious legislative chambers, into humble shacks and the office of President Lincoln. She came to Battle Creek, an abolitionist stronghold in 1858. Although she is commonly believed to have aided her people in their trips northward by way of the Underground Railroad, there are historians who doubt that Sojourner Truth ever assisted any slave runaway to escape. She, in any event, carried on a harder task; she sought to inspire the whites to help her people. Her program was one of work toward economic competence, self-improvement, and social

BATTLE CREEK

TENTHS 0 1/2 1 MILE
scale of miles

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POINTS OF INTEREST

- 1 KELLOGG FACTORY
- 2 POST PRODUCTS FACTORY
- 3 OAK HILL CEMETERY, GRAVE OF SOJOURNER TRUTH
- 4 KELLOGG AUDITORIUM
- 5 POST TAVERN
- 6 IRVING PARK
- 7 BATTLE CREEK SANITARIUM
- 8 LEILA ARBORETUM

tolerance for Negroes. A few days before her death in 1883, she said: 'I isn't goin' to die, honey, I'se goin' home like a shootin' star.'

4. KELLOGG AUDITORIUM, W. Van Buren and McCamly Sts., presented to the city by W. K. Kellogg, is a part of the first unit of a proposed civic center to be established in an old residential section. The \$750,000 auditorium is a three-story brick building, illuminated by concealed floodlights, with a seating capacity of 2,700. Adjoining this is a completely equipped gymnasium and a junior high school.

5. POST TAVERN, W. Michigan Ave. and McCamly St., is known chiefly for its ART COLLECTION (*open always*), which is displayed in the Blue Room, promenade, and lobby. Numbering 150 paintings, and originally a part of C. W. Post's private gallery, the collection is chiefly composed of marines and pastorals. A portrait by Dante Gabriel Rossetti and a pastoral by G. W. Horlor are among the more valuable pieces; the entire collection is valued at \$250,000. The hotel also has a LINCOLN ROOM, outfitted with furniture of the Civil War period. A giant cherry-wood chest is one of the rare pieces, although the story that it once belonged to Abraham Lincoln is probably no more than pleasant fiction.

6. IRVING PARK, North Ave. at Emmett St., a 30-acre tract in the city's park and playground development, includes one of the finest rock gardens in Michigan, and its greenhouse contains many rare plants from all parts of the world. Picnic grounds and tennis facilities are available in summer; three lagoons afford supervised skating in winter.

7. BATTLE CREEK SANITARIUM (*open 3-5 Mon.-Fri.*), N. Washington Ave. and Champion St., is a large brick structure of modified Renaissance style, covering 25 acres. The front elevation of the tallest unit, a 15-story addition erected in 1927 at a cost of \$2,000,000, is marked by an impressive colonnade, which is repeated at the other entrances. At the rear of the building is a semicircular TROPICAL GARDEN; radiating from it are three wings that contain treatment rooms. In the center is a large gymnasium.

8. LEILA ARBORETUM (*open always*), W. Michigan Ave. and 20th St., presented to the city by Mrs. Leila Post Montgomery, is considered one of the finest arboretums in the country. It contains more than \$75,000 worth of plants, shrubs, trees, and flowers, and nurseries for the development of rock-garden plants, shrubs, and other plants. The entire tract is terraced with winding drives and has scores of footpaths. A lagoon adds beauty to the landscape. The KINGMAN MEMORIAL MUSEUM (*open 9-4 daily*), on the Arboretum grounds, houses 125,000 specimens of wild life, minerals, prehistoric mammals, ancient relics, and sea growths.

POINTS OF INTEREST IN ENVIRONS

American Legion Hospital, 4 m.; Fort Custer, 6 m.; Kellogg Bird Sanctuary, 13 m.; Camp Kitannina, 17 m. (*see Tour 2*).

Bay City

Railroad Stations: Seventh and Water Sts. for Grand Trunk R.R.; foot of Jackson St. for Michigan Central R.R. and Detroit & Mackinac R.R., 501 Fifth Ave. for Pere Marquette R.R.

Bus Station: 1010 Saginaw St. for Eastern Michigan, Greyhound, Indian Trails, Balcer Bros., Great Lakes, Rogers Motor Lines

Taxis: 15¢ first mile; 5¢ each additional $\frac{1}{4}$ mile.

Local Busses: 5¢ fare within city; 2¢ transfer.

Traffic Regulations: Visitors from outside Bay County may secure 'Visitors' Cards' at Chamber of Commerce or any business place, which will permit overtime parking, but will not allow parking in prohibited areas. No turn on red light.

Accommodations: 5 hotels; tourist rooms; tourist camp, Bay City State Park, on State 111, $4\frac{1}{2}$ miles N. of city; small charge for electrical connections and use of bathhouse. No seasonal rates.

Information Service: Chamber of Commerce office in Wenonah Hotel Bldg., Center Ave. E. off Water St.; East Michigan Tourist Association 'Log Office,' Fifth Ave. E. of Adams St.; Automobile Club of Michigan, 1009 Washington Ave.

Radio Station: WBCM (1410 kc.).

Motion Picture Houses: 10.

Swimming: Beaches at Bay City State Park and Waterworks Park, both on State 111, $4\frac{1}{2}$ miles N. of city, and Wenona Beach, 2 miles N. of city limits on Patterson Ave. (fees for use of bathhouse)

Golf: Euclid Club, N. Euclid Ave., 18 holes, greens fee, 75¢.

Fishing: At mouth of Saginaw River and on Saginaw Bay (boats for rent at several places along the river); winter fishing through ice on Bay and River.

Tennis: Carroll Park, Park Ave. and 3rd St., Bay City Country Club, S. Euclid and Fisher Aves. (courtesy cards for club courts available at Chamber of Commerce); Central High School, Columbus Ave. at Hampton St., Kolb Field, Crump and Wenona Aves.; T. L. Handy Jr. High School, Blend and W. Clare Sts.

BAY CITY (604 alt., 47,355 pop.), lying three miles upstream from the point where the Saginaw River enters Saginaw Bay, today bears no resemblance to the roaring milltown it was in the last decades of the nineteenth century. Little remains of the color and flavor of the days when Bay City attracted hundreds of red-sashed lumberjacks, coming with the spring log-drives to work in the mills after months of toil in the woods.

Felled trees used to be the principal source of Bay City's prosperity; standing trees today are the chief source of its beauty. Long lines of mature hardwoods flank the streets, their branches arching across wide thoroughfares. Seen from the upper stories of the Bay County Building, the city, in many sections, has the appearance of a dense woodland. Only the central downtown business blocks are treeless.

The last of the sawmills that once lined both banks of the Saginaw River for eight miles or more was razed in 1936. Reminders of the lumbering days are visible along the river banks in scattered spiles—pine logs driven into the river bed to form foundations for loading docks and sawmills—and in long-disused boat slips. Big freighters ply the channel that was once choked with logs, driven down from the upper reaches of the Saginaw or towed up in rafts from the Bay. The influence of the lumbering period is reflected in Bay City's many large frame dwellings.

The Saginaw River, cutting through the center of the city and emptying into Saginaw Bay, three miles northeast, carries lake traffic to and from Great Lakes and ocean ports. The river is the harbor for many pleasure craft and the home port of a considerable fleet of fishing tugs that work in Saginaw Bay. The spawning run of yellow pickerel in early April brings dozens of fish tugs from other Lake Huron ports to work the waters of the Bay (*see Tour 11*). Fishing through the ice for both sport and profit is common in winter. The amateur fisherman sets up a tar-paper shanty on the ice and fishes with hook and line or with a spear; commercial fishermen run their nets under the ice.

The first permanent white settlers came to the site of Bay City in 1831, attracted by the favorable position close to the mouth of the Saginaw River, the principal transportation medium of the time. The Tromble brothers, Joseph and Mader, Indian traders, built the first permanent frame house in 1836. The first settlement was on the east shore of the river near what is now Lafayette Avenue; later settlers took land on the west bank. The village of Lower Saginaw was the largest of the cluster of eastside settlements; upstream from it was the village of Portsmouth. On the west shore were the villages of Wenona, Salzburg, and Banks.

After 1860 the lumbering industry developed rapidly, and communities on the Lower Saginaw became the centers of milling activity. In 1872 there were 36 mills between the southern boundaries of Portsmouth and the mouth of the river and some of them were among the largest in the country. The settlements constituted a one-industry town; the whine of saws biting into logs was heard ten hours a day; and the smell of fresh lumber was strong enough to flavor food. The lumber, piled so that air could circulate through it, lined the banks of the river so solidly that the Saginaw appeared to flow between wooden walls. On the borders of the river's channel lay logs waiting to be milled, and busy tugs churned back and forth, bringing huge rafts to the mills or conveying barges loaded with lumber to other lake ports. Sometimes the channel would be clogged for hours, while small craft of every description idled at anchor until the traffic was unsnarled.

Social and commercial life was conditioned by lumber. Mill owners, middlemen, lumber inspectors, and tally boys comprised the chief levels of society. The middlemen in particular, concerned with the distribution of lumber or with the sale of supplies to mill and camp, were

numerous and prosperous. From general merchandising to the commerce of the new railroads, every business revolved around lumber.

One of the high lights of Bay City, as of other lumber towns, was the regular arrival of swaggering lumberjacks, released from months of monotonous winter labor, thirsty and pleasure-bent. Water Street, now a staid commercial thoroughfare, was then lined by saloons; many are said to have had 'catacombs,' from the trapdoors of which dead brawlers and victims of skulduggery were sped into watery graves. The lumberjacks and rivermen who patronized 'Hell's Half Mile' on Water Street were entertained with whiskey, women, dancing, and fighting. Among the 'refinements' added by some saloonkeepers were 'rat mains.' Rats, plentiful along the waterfront, were trapped alive and unloosed in a pit with a terrier eager to break their backs. A once-famous Water Street character sometimes took the terrier's place in the pit and was accordingly nicknamed 'Paddy the Dog.'

A ferry service connected the east and west villages in the early lumbering days, but, owing to the virtual blockade of the channel by logs and shipping, this service was replaced in 1865 by a toll bridge on the site of the present Third Street bridge. Shortly before this the village of Lower Saginaw had absorbed the other eastside settlements and changed its name to Bay City, to distinguish it from the earlier established Saginaw a dozen miles upstream. The villages on the west bank merged and took the name of West Bay City. The river that brought life to these two communities was also long a barrier between them, but in 1903 they finally were consolidated as Bay City.

As a sawmill town in 1890, Bay City reached the height of its boom prosperity and the peak of its population. Although the fine stands of timber in the Saginaw Valley had been depleted, Canadian forests were still open to exploitation. Michigan prospered in a paradise based upon free Canadian logs. Rude awakening came when the Federal Government, at the request of Southern and Western lumbermen, raised the tariff on Canadian lumber; the Canadian Government promptly retaliated with a heavy export duty on logs. As a result, mill after mill was abandoned and Bay City's days as a lumber town abruptly ended. The next 20 years saw a diminution of its population by one-fifth. Bay City narrowly missed becoming one of the 'ghost towns' left behind by the vanished pineries. Soft-coal mining, commercial fishing, and the developing of beet sugar, however, enabled it to survive.

The present city has a heterogeneous population. The descendants of Polish immigrants, who began homesteading the area south of Bay City in 1872, compose the largest racial group. When these farm lands were later absorbed by the expanding city, many Poles became mill-workers and longshoremen. French-Canadians came to the region early, settling mainly in the section known as Banks; good fishing waters on the Saginaw Bay attracted them, and their descendants are still the mainstay of the fishing fleet. The Irish came with the expansion of timber operations. In the Saginaw area, as throughout Michigan, they were the bone and sinew of the lumber business. Folkways are still in

evidence. To many French-Canadians, New Year's Day is more important than Christmas; the Poles still make an extended celebration of a wedding. Although there are some bilingual parochial schools, the general drift has been away from ancestral foreign languages. Churches that formerly conducted all or most of their services in a foreign tongue, now have only one such service or have changed entirely to English.

Bay City has had the manager-commission-mayor type of government since 1921. A municipally operated distribution system buys electricity from a private utility at wholesale, and retails it in competition with the private company; light and power rates are consequently lower than in many comparable cities in the State. There are two public libraries, one on each side of the river.

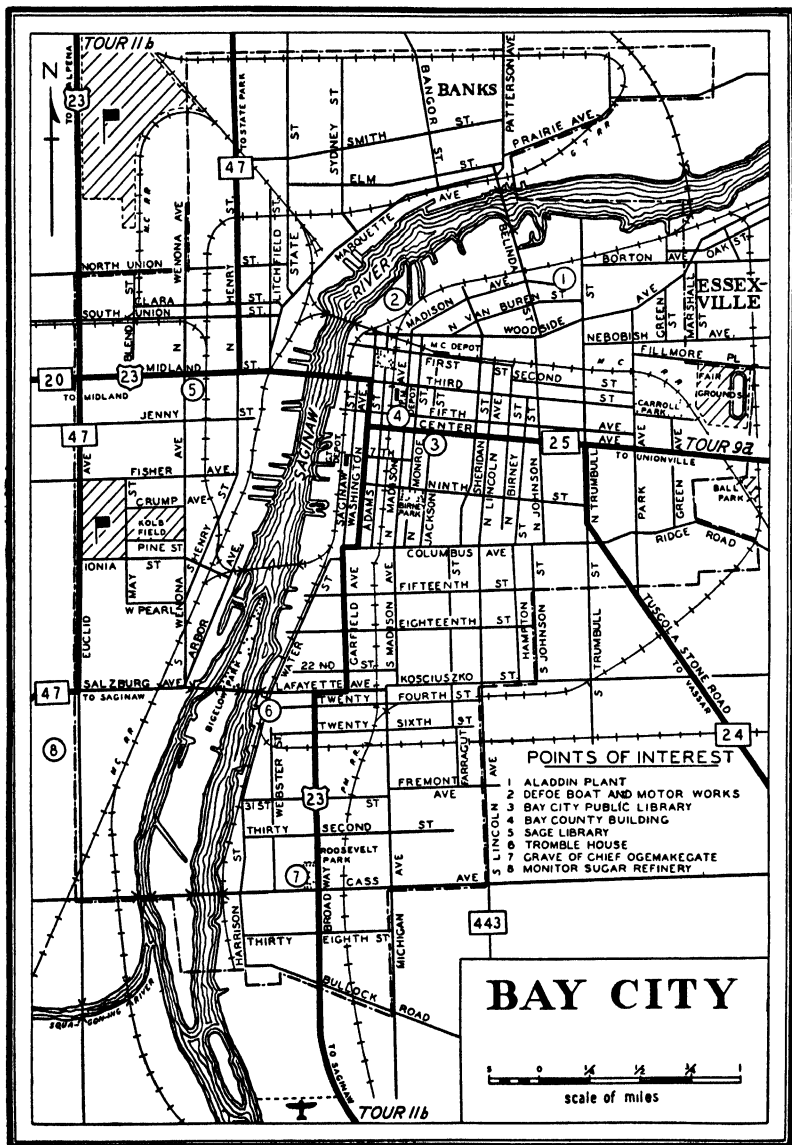
Chief among the products manufactured by Bay City's 78 industries are automotive parts, heavy lifting machinery, ready-cut houses, knitted wear, and beet sugar. About 6,700 persons are employed; the total annual wage amounts to \$8,500,000. The chief natural resource of the vicinity is soft coal. Brine underlying the entire region is the source of magnesium metal manufactured in Midland. Shipbuilding has been an important local industry for more than half a century.

POINTS OF INTEREST

1. The ALADDIN PLANT (*open by permission*), 700 Belinda St., manufactures ready-cut houses and automobile trailers. Standardized homes are planned here; the lumber is sawed to proper length and shipped to the buyer, ready to be erected.
2. DEFOE BOAT AND MOTOR WORKS (*open by permission*), N. end of Adams St., is one of the leading shipyards on the Great Lakes. The hulls of steel vessels under construction are often to be seen in the yards; smaller boats are in the finishing sheds.
3. BAY CITY PUBLIC LIBRARY (*open 9-9 weekdays, 3-6 Sun.*), Center Ave. and Jackson St., is a two-story red-brick structure of modified Georgian design, surrounded by trees and covered with vines. Founded by demobilized Union officers in 1869 as a private library, it was turned over to the city as a public library a few years later. The present building, constructed in 1922, was made possible by W. L. Clements, donor of the Clements Library of Early American History at Ann Arbor, through both personal donations and activities to obtain supplementary funds from the Carnegie Foundation. Among the 63,000 volumes in the library are 22 volumes of the *Lumberman's Gazette*, all but four of the complete file published by Henry Dow in Bay City between 1872 and 1885. There are also 250 volumes on early travels in the Middle West.
4. The BAY COUNTY BUILDING (*open 9-4:30 weekdays*), 515 Center Ave., an eight-story structure of limestone and granite, was designed by Joseph C. Goddeyne of Bay City. The BAY COUNTY HISTORICAL SOCIETY MUSEUM (*open 2-5 Tues.-Fri.*), on the second floor, has a notable collection of pioneer relics, including a dugout canoe,

blackened with age; old pictures of Bay City; handmade linens of Revolutionary days; a firearms collection; and a case of old Bibles and hymnals.

5. The SAGE LIBRARY (*open 10-9 weekdays*), Midland St. at Wenona Ave., a three-story building of cream-colored brick, shaded



by tall elms and maples, was opened in 1883 as a gift to West Bay City. Its donor, Henry W. Sage of Ithaca, New York, made a lumbering fortune in Bay City during the latter half of the nineteenth century. The façade is pronouncedly French Provincial in treatment. Reference works constitute the majority of the 60,000-volume library. On the second floor is a collection of dolls in the costumes of many countries, donated by Mrs. Sara Davidson Young.

6. TROMBLE HOUSE (*private*), NE. corner 24th and Water Sts., a two-story frame structure, was erected in 1836 as a combination residence and trading post for Joseph and Mader Tromble. Its builder was Nathan C. Case of Saginaw. With the exception of a lean-to kitchen added later, the structure retains its original form. The foundation is of shale brought by fishermen from the Charity Island Reef far out in Saginaw Bay; the foundation sills and the shingles were hand-hewn and split.

7. The GRAVE OF CHIEF OGEMAKEGATE, in Roosevelt Park, Broadway at Cass Ave., is marked by a boulder with a bronze plaque. Chief Ogemakegate was one of the speakers for, and signers of, the Lewis Cass Treaty of 1819, which was concluded at Saginaw.

8. The MONITOR SUGAR REFINERY (*open by permission*), Euclid Ave. at SW. city limits, operates from September through December. Receiving beets from the fields, it begins their transformation into sugar by weighing and testing the sugar content. The vegetables are then conveyed to storage bins and thence to the washers and slicers. After being sliced, they are rasped and scarified to break up the cells. The resultant pulp is purified and boiled down to a rich sirup, which is revolved in centrifuges to separate the sugar before the final processes of granulation and packing.

9. The FEDERAL BUILDING (*open*), Washington Ave. between Third and Fourth Sts., is a good example of modern French Renaissance architecture.

POINTS OF INTEREST IN ENVIRONS

Dow Gardens, 19 *m* ; Edenville Lumberjack Museum, 37 *m*. (*see Tour 5*). Quanicasee, 115 *m* , Site of the Socialist Community of Ora Labora, 435 *m*. (*see Tour 9*) Bay City State Park and Fish Hatchery, 45 *m*.; Veterans Memorial Parkway, 5 *m*. (*see Tour 11*).

Benton Harbor and St. Joseph

Railroad Stations: *Benton Harbor*—Union Station, Water and 6th Sts., for Pere Marquette R.R. *St. Joseph*—Union Station, Vine and Broad Sts., for Pere Marquette R.R.

Bus Stations: *Benton Harbor*—Vincent Hotel, 6th and Main Sts., for Greyhound and South Shore Lines; Union Bus Depot, 5th and Main Sts., for Indian Trails Line. *St. Joseph*—Carlton-Walters News Agency, State and Broad Sts., for Greyhound, Indian Trails, and South Shore Lines.

Airport: US 12, ½ mile E. of Benton Harbor. No scheduled service.

Taxis: Same rate both cities. 15¢ single passenger to any point in city, 25¢ for 2 to 5 passengers; intercity rate between St. Joseph and Benton Harbor, 25¢ single passengers, 50¢ for 2 to 5 passengers

City Busses: Fare 10¢, 4 rides for 25¢, serving all sections of both cities, 7 min. service between cities.

Piers: Chicago-Roosevelt Steamship Co., pier entrance by footpath near intersection of Vine and Water Sts, St. Joseph, one trip daily during summer to Chicago and South Haven, Mich. (passengers only).

Traffic Regulations: *Benton Harbor*—No turn on red light, left turn on green light; speed limit 20 m.p.h. in business section, 25 m.p.h. in residential section. *St. Joseph*—Same, except 35 m.p.h. speed limit on Sunset Drive.

Accommodations: *Benton Harbor*—10 hotels, boarding houses; inns. Rates higher between June 15 and September 15. *St. Joseph*—9 hotels; boarding houses, inns.

Information Service: *Benton Harbor*—Chamber of Commerce, 215 E. Main St.; Automobile Club of Michigan, 216 E. Main St.; during resort season information bureaus at Hotel Vincent, 6th and Main Sts, and House of David, Britain Ave. E. of Fair St. *St. Joseph*—Chamber of Commerce, Ship St., opposite Whitcomb Hotel; information bureau at Whitcomb Hotel during resort season.

Motion Picture Houses: *Benton Harbor*—3. *St. Joseph*—2.

Swimming: *Benton Harbor*—Jean Klock Park, foot of Grand Blvd; Rocky Gap Park ¼ mile N of Jean Klock Park. *St. Joseph*—Public Beach, Sunset Drive and 7th St.; Silver Beach, foot of Broad St

Golf: Berrien Hills Country Club, 2 miles S. of St. Joseph on US 12: 18 holes, greens fees, \$1 per day for nonmembers, \$1.50 Sat. and Sun, Martin Hills Golf Course, 4 miles S. of St. Joseph on Niles Rd. (US 31): greens fees, 50¢ per day, 25¢ after 4 P.M.

Athletics: *Benton Harbor*—House of David, Britain Ave. E. of Fair St. *St. Joseph*—Municipal Field, between Lake Blvd. and Vine St.

Annual Events: *Benton Harbor*—Blossom Festival, beginning Sunday of week that includes May 10 blossoms parade, masquerade ball, pageants, water carnival, crowning of blossom queen. Yacht Races, July 4, Labor Day, and other times during resort season. Fruit and Flower Festival in October. *St. Joseph*—Yacht Races and Swimming Carnival, July 4; Yacht Races and Sailing Regatta, Labor Day.

BENTON HARBOR (596 alt., 15,434 pop.) and ST. JOSEPH (591 alt., 8,349 pop.) are, geographically, virtually a unit, divided by the St. Joseph River. Both are surrounded for a radius of 40 miles by apple, peach, plum, pear, and cherry orchards. St. Joseph rises west of the river on a hill overlooking Lake Michigan. At the junction of lake and river is an industrial area, and a short distance up the river is the business section. Between the cities, at the foot of the high bluff on which St. Joseph stands, is a section known as the flats, populated largely by Germans. Along the lake shore, north and south of the river mouth, stretch miles of handsome summer cottages.

The two communities are so homogeneous that only residents can be perfectly sure of the boundary lines, and the existence of any marked difference, apart from size, is scarcely discernible even by them. The cities have mutual interests and aspirations: their festivals and other vacation attractions are co-sponsored; they are alike in nearly everything, from traffic regulations to twin commission-manager governments.

Nationally, Benton Harbor is the better known of the two. Larger than its neighbor, it is renowned as the seat of the world-famous House of David, a religious colony, and for its Municipal Fruit Market, said to be the largest in the world. Its Blossom Festival—conducted jointly with St. Joseph—attracts 200,000 or more visitors every May.

St. Joseph's major appeal is to vacationists and resorters, who find pleasure in its bathing beaches and health in its mineral springs. It is nearer the lake, has the better harbor of the two, and is favored as a resort by the well-to-do.

Wayne Street of St. Joseph leads to Main Street of Benton Harbor, by way of a bridge across the river. Perhaps the most notable difference in this section is the extreme width of Benton Harbor's streets. The river front is lined with industrial enterprises. The business section is farther up on Main Street. Some blocks east is the deep gulch of Ox Creek Valley, through which the Cleveland, Cincinnati, Chicago & St. Louis Railway enters the city, separating the downtown portion from the eastern residential area, large sections of which are owned by the House of David. The northern city limits have been extended to include Jean Klock Park, which—indicative of the two cities' apparent unity—many persons erroneously assign to St. Joseph.

Residents for the most part are American-born. Benton Harbor, newer of the two, has the larger number of distinct ethnic groups, notably an Italian section on Territorial Street east of Ox Creek Valley, a Russian settlement bordering it on the north, and a Jewish neighborhood farther east in the vicinity of Fair Avenue. A large Negro group has settled south of the Municipal Fruit Market on land that was originally an overflow marsh from the St. Joseph River.

The marshy character of the Benton Harbor site caused the first settlers in this region to favor the St. Joseph hillside. Among the first visitors were Father Jacques Marquette, who journeyed up the St. Joseph River in 1669, and, some years later, René Robert Cavelier,

Sieur de La Salle, who constructed Fort Miami at the river's mouth. The fort was destroyed, but in 1700 a Jesuit mission and a second fort were built here. For more than half a century the French flag flew over the settlement, until, in 1763, Chief Pontiac pulled it down and razed the post. Twenty years later, William Burnett of New Jersey constructed another trading post and planted the first domestic cherry and apple trees in the region.

Johnny Applesseed, the almost legendary eccentric who planted nurseries of apple trees in the Ohio River Valley and distributed the trees to the Indians, is generally credited with being the founder of southwestern Michigan's extensive fruit culture. However it may have been started, fruit growing became an increasingly important industry in the area, chiefly because of Lake Michigan's tempering effect on the climate. Pioneers found many blackcaps, dewberries, huckleberries, cranberries, currants, and wild grapes here. Those who came from New York State, as the majority did, brought young trees and vines for transplantation.

The first settlement near the mouth of the St. Joseph River was Newburyport, founded in 1831. But after five years of prosperous existence, Newburyport was completely buried by shifting sands. Vainly the residents erected fences and shoveled the sand away from their doors, only at last to give up the unequal struggle and move farther up the hills onto the site of St. Joseph.

Incorporated as a village in 1836, St. Joseph grew slowly, despite the improvement of its harbor that year. Incoming settlers, finding the price of land too high, built their homes east of the river and began to carve out a solid future for themselves in the manufacture of barrel bungs. They called their settlement Bronson Harbor, after its founder, but St. Joseph haughtily dubbed it 'Bungtown Harbor.' Apparently some compromise was effected, for in 1869 the settlement was incorporated as a village under the name of Benton Harbor.

Twenty years later, Benton Harbor had so far outgrown its older rival that it applied for a city charter. Angered by this precocity, St. Joseph laid claim to a strip of land across the river, which Benton Harbor proposed to include within its boundaries. Climaxing the ensuing dispute, the State legislature decided that one charter should be issued to include both villages; but the contestants were unable to agree on a name, and in 1891 the two cities at last were chartered separately.

The breach caused by this quarrel was long in healing. Each community tried to outbid and outdo the other. Working at direct odds, representatives of the rival towns sought prospective settlers and manufacturers; recitations of the advantages of the one city were invariably accompanied by disparagements of the other. In time as Benton Harbor boomed and St. Joseph lost its importance as a lake port, a tradition of separation and rivalry was established. Later, however, impelled by a desire to enlarge local trade, the cities gradually met on grounds of common interests and forgave the injuries that each had done the

other. The issues dividing them became blurred, and petty jealousies were replaced by a bond of friendship.

In 1903, Benjamin Franklin Purnell, known as King Ben, and his 'holy rollers' of the Israelite House of David established a colony in Benton Harbor. Interchurch dissension followed the leader's death in 1927, and in 1930 the House of David, numbering 600, split into two groups; one followed Queen Mary, Purnell's widow, while the other remained with Judge Harry T. Dewhirst, an enterprising colonist from California. Queen Mary and her flock of 217 established a new colony, called the Israelite City of David, next door to the original settlement.

Both factions, although bitter rivals, profess to follow the dictates of the faith laid down by King Ben. Members do not smoke, drink, or eat meat. Upon joining, they contribute all their possessions to the general fund and, in exchange for communal work, are given enough to satisfy daily needs. Both branches are exceedingly prosperous and divide between them a large share of the business interests of the twin cities, including hotels, tourist camps, restaurants, a cold-storage plant, print shops, and fruit farms. Each group has a band, an orchestra, and a bearded baseball team whose members play bare-handed; the teams usually enjoy a high ranking in national semiprofessional competition. Both branches have extensive realty holdings in Benton Harbor and in resort subdivisions.

In addition to resort and tourist trade and agricultural interests, Benton Harbor and St. Joseph have foundries, auto-parts plants, hosiery mills, shipyards, and machine shops. Both cities publicize their annual Blossom Festival, featured by parades, balls, concerts, and the coronation of a Blossom Queen. The co-operation the cities have substituted for their former enmity has been mutually profitable. The local shrines, however, are in curious contrast: in Benton Harbor, King Ben lies, permanently embalmed, under glass; while in St. Joseph, a monument in Lake Front Park honors Ben King (Benjamin Franklin King, Jr.), humorous poet, who was born in the town in 1857 (d.1894).

POINTS OF INTEREST

HOUSE OF DAVID (*open always*), Britain Ave. E. of Fair Ave., Benton Harbor, the original colony established by King Ben in 1903, covers 130 acres. The nucleus of the House of David's wealth was a \$75,000 gift from a carriage manufacturer, donated shortly after Purnell was said to have received a scroll from a dove that alighted on his shoulder; the dove's message declared that King had been chosen Seventh Messenger of the Faith founded in 1792 by an Englishwoman, Joanna Southcott. Purnell's previous experience as a member of religious colonies in Richmond, Indiana, and Detroit equipped him to lead the 'ingathering of Israel,' composed of converts secured in travels throughout Illinois, Ohio, Indiana, Kentucky, and Michigan. On the donated land, Purnell built his five houses, Bethlehem, Jerusalem, the Ark, Shiloh, and the Diamond House.

Beginning as a broom maker, Purnell amassed a fortune reputedly amounting to almost a million dollars. Israelites traveled the countryside in wagons, decorated with winged scrolls, promising that 'Millions now living will never die.' Benjamin preached that, when his colony grew to 288,000 members, they would all be transported in a body to Heaven. Only those who transgressed the rigid laws of the faith would fail to attain his heavenly goal. Such sinners were buried in unmarked graves.

King Ben, it seems, was not without fault, and stories concerning his moral lapses began to circulate among members of his flock. These charges were mainly uttered by the malcontents, unhappy prisoners in the House of David penal colony on High Island in the Beaver Archipelago (*see Beaver Archipelago*). When the accusers were freed in 1923 to appear as witnesses for the State in its suit to dissolve the House of David, their testimony generally corroborated that of two young girls who charged King Ben with immoral practices under the guise of religious ritual.

The trial was a fantastic drama. Witnesses disappeared, charges of intimidation were made, and for three years Purnell himself could not be found; ultimately the colony was raided and King Ben was brought into court on a stretcher, to whisper faintly denials of the charges. Although the court's ruling that the colony should be divided was later reversed, Purnell did not learn of his legal vindication. For despite his contention that virtuous members of the House of David enjoyed immortality, he died in 1927. The body was concealed for several days in the hope of resurrection, but his death was finally made public. His mummified remains were placed in the colony's glittering Diamond House, so called because the special composition of its concrete blocks causes it to sparkle in the sun.

King Ben's successor, Judge Dewhirst, has vastly expanded the colony's operations and holdings. The grounds are well landscaped, and a fine park, the GARDEN OF EDEN, is tucked away in a little valley. Miniature steam trains are routed through the park, passing all places of interest, including an AVIARY (*adm.* 10¢) and a small Zoo (*adm.* 10¢). A large outdoor AUDITORIUM, built in 1933, affords free summer entertainment, with concerts by the House of David Band and vaudeville supplied by home talent.

ISRAELITE CITY OF DAVID (*open daily*), Britain Ave. just E. of the House of David, Benton Harbor, operated by Queen Mary, is only a little less pretentious than the Dewhirst enterprise. This faction is distinguished by its scrupulous observance of all the tenets in the deceased king's faith, maintaining to this end a public VEGETARIAN RESTAURANT that specializes in mock steaks made of vegetables. During Queen Mary's rule the membership has grown, houses and farms have been acquired, and a hotel in downtown Benton Harbor has been completed. On the grounds are a large Administration Building and

cottages for members and tourists. Each faction maintains a bus system to transport visitors between incoming steamers and the colony grounds.

BENTON HARBOR MUNICIPAL FRUIT MARKET (*open June to November*), Lake St. between Ninth and Twelfth Sts., has handled more than 7,200,000 packages of fruit in one season, valued at nearly \$5,000,000. The market's volume of business enables it to influence prices throughout the fruit district of southwestern Michigan and to exert a strong pressure on produce prices for the entire Middle West. The market has sold to buyers from 567 different cities in 28 States in one year, including truckers from the Gulf States, the Carolinas, and as far west as Nebraska. The open-air market is supported by a buyers' fee, based on purchases. Sellers pay only a 10¢ admission fee. A recent addition to the market is a large up-to-date cold-storage plant, built and operated by the House of David, with a capacity of several hundred thousand bushels.

JEAN KLOCK PARK (*picnicking, swimming*), foot of Grand Blvd., a 90-acre sand tract fronting on Lake Michigan, was presented to Benton Harbor in 1917 by J. N. Klock, first city manager, with the request that it be maintained in its natural state, as a playground for children and a public bathing beach.

ST. JOSEPH'S LAKE FRONT PARK, on Lake Blvd. between Park and S. State Sts., is a popular recreation center because of the excellent view it commands of Lake Michigan. Well tended and shaded by hardwood trees, the park occupies a steep bluff that drops abruptly about 150 feet on the lake-shore side. In it is a **CANNON OF THE U.S.S. MARION**, a Revolutionary War relic, pointing its muzzle over Lake Michigan.

OLD LIGHTHOUSE, Lake Blvd., St. Joseph, was constructed in 1859 and operated until 1924. It consists of a revolving beacon atop a typical frame house of the late 1850's. In 1936 the United States Government deeded the lighthouse to St. Joseph, along with the adjacent **MEMORIAL HALL**.

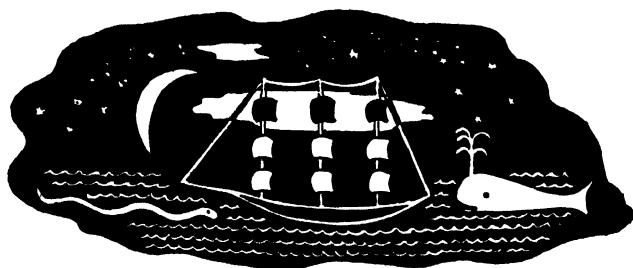
ST. JOSEPH PUBLIC BEACH, Sunset Drive, is the scene of what is said to have been the first flight of a power-driven heavier-than-air craft. In October 1898, five years before the Wright brothers' flight, Augustus Moore Herring is reported to have flown here in a plane of his own invention, driven by a compressed-air motor. The flight is said to have lasted seven seconds, but the only photograph taken was snapped after the plane had returned to earth.

Herring, who later entered into partnership with Glenn H. Curtis but was frozen out in bankruptcy proceedings, was the discoverer of one of the major principles in aeronautics: that the upper surface of the wing performs the most important function in lifting the airplane, and that a wing with a convex upper surface is essential to flight. He pioneered in the development of the two-cylinder opposed gasoline

motor. Despite his vital contributions to aeronautics, he died in obscurity in 1926.

POINTS OF INTEREST IN ENVIRONS

(Distances from St. Joseph) Grande Vista Gardens, tourist camp operated by House of David, 7 *m.*; Warren Dunes, 15 *m* (*see Tour 2*) Thunder Mountain, sand dune, 13 *m.*; Van Buren State Park, 20.5 *m* (*see Tour 15*).



Dearborn

Railroad Stations: Michigan Central Depot, Howard St. near Mechanic St. (West Dearborn), for Michigan Central R R

Bus Stations. Michigan Ave and Schaefer Road (westbound, Cunningham's Drug store; eastbound, Dearborn City Hall), for Blue Goose, Greyhound, and Dearborn Coach Lines.

Airports. Burns Airport, Plymouth and Telegraph Roads, 3½ miles N of Dearborn, no scheduled service, Ford Airport, Airport Drive and Oakwood Blvd, no scheduled service, Haggerty Field, Ford Road and Wyoming Ave, no scheduled service.

Taxis: 15¢ first ¼ mile, 5¢ each additional ¼ mile.

Streetcars Fare 6¢; 1¢ transfer to streetcars, 4¢ to busses.

Busses: Zone system, fare 5¢ and 10¢.

Dearborn-Detroit Bus Service. Dearborn City Hall to Barlum Tower, Cadillac Square, Detroit, 10¢; from West Dearborn, 15¢ Busses leave Hotel Fort Shelby on the hour, stopping at Book-Cadillac, Detroit-Leland, Statler, and Tuller hotels, and Michigan Central Depot, to Rotunda 15¢; to Greenfield Village 25¢ Leave Rotunda 25 minutes to the hour.

Traffic Regulations. Regulation traffic lights in business districts and through highway intersections No turns permitted on red lights No left turns permitted at Schaefer Road and Michigan Ave except Sundays and holidays One hour parking limit on Michigan Ave. in business district. No U-turns where traffic lights are installed.

Accommodations: 20 hotels.

Information Service Ford Rotunda; Public Relations Bureau, Dearborn City Hall; Dearborn Inn, Automobile Club of Michigan, 1015 S Monroe Ave. (West Dearborn).

Motion Picture Houses: 5

Golf: Dearborn Hills Country Club, Telegraph Road north of US 112, 18 holes, greens fee, 50¢.

Athletics. Ford Field, between Northview Ave. and S. branch of the River Rouge.

Tennis: Fordson High School, Ford and Maple Roads; Dearborn High School, Garrison and N. Mason Ave, and Michigan Ave at Brady St.

Ice Skating: Ford Twin Lakes, Oakwood Blvd. at Park St.

Annual Events: Dearborn Day, in July; Early American Dancing and Calling Contest for Dearborn school children, in May; Cosmopolitan Club Fair, late autumn.

DEARBORN (600 alt., 50,358 pop.), home of the Ford Motor Company and of its founder, Henry Ford, is not a suburb of Detroit, but a city composed of two cities, Fordson, formerly Springwells, and Dearborn. Both Detroit and Dearborn have spread out until they meet at Wyoming Avenue, 5½ miles west of Detroit's city hall. Dearborn,

extending westward nearly 7 miles to the township line, Gully Road, has an area of 25 square miles. The River Rouge, named by early French settlers for its color, and its tributary, the Branch River, meander through the city.

The site of Dearborn is generally flat, with low, rolling hills in the western end. A bird's-eye view reveals a city divided: The main centers of activity are in the east and west ends, separated by an undeveloped central section. A housing project, planned by the Ford Foundation to provide homes for 16,000 persons, will upon completion knit together the eastern and western sections. Plats for the first unit were drawn up in 1938, covering 125 acres of the two square miles set aside by the Foundation for housing purposes.

There is no line of demarcation to separate Dearborn from Detroit along the usual approach, Michigan Avenue, except a sign marking the city limits. The small but lively business district of the Fordson section, chiefly on the north side of Michigan Avenue, is the first indication of a different city. West of the business district, in the municipal square, the City Hall raises its spire at the southwest corner of Schaefer Highway. Grouped around it are other municipal buildings—the Fire Hall, Municipal Courts Building, and the Signal Building, all of Colonial design. West of the municipal square, the city thins out in a manner typical of the average small town. A two-mile stretch of open country, distinguished by sweeping roadways, begins just west of Greenfield Road; here for a short distance Michigan Avenue parallels the River Rouge. Brady Street is the beginning of the larger business district of West Dearborn, sometimes called Old Dearborn.

If the approach to Dearborn is by way of Fort Street and Miller Road, the giant Ford chimneys and conveyors, the coke ovens tumbling their white-hot contents into a miniature train, and miles of busy factories in the southern section of the city (not seen from the Michigan Avenue approach) make the rest of the town seem a mere appendage.

The population is 59 per cent white foreign stock, of whom 13,395 are foreign born and 16,222 native born of foreign parentage. Along the eastern Dearborn-Detroit boundary are found 32 nationalities. In order of numerical strength, the principal racial groups (including the second generation) are Polish, English and Scotch, German, Italian, Rumanian, Russian, Irish, French-Canadian, Yugoslavian, Czechoslovakian, Austrian, Hungarian, and Swedish. The racial picture includes such differing peoples as the Finns, Danes, and Hollanders and those of southeastern Europe and the Near East, including Greeks, Bulgarians, Armenians, and both Christian and Mohammedan Syrians. The latter groups live near the Ford plant in the southeastern corner of Dearborn, along with many Rumanians who followed the Ford factory when it moved from Highland Park. The Mohammedans are building a mosque here to replace the one they used for a few years while residents of Highland Park (*see Mohammedan Mosque, Highland Park, Detroit*). A one-story section of the mosque, completed in

1938, will become a semibasement when the second story is added. Its builder is Minerat-Al-Hada.

The neighborhood between Warren Avenue on the north, the Ford Factory on the south, and Schaefer and Miller Roads on the west and east, respectively, is occupied by Germans, Czechoslovaks, Hungarians, Swiss, Russians, and French-Canadians. On the south side of Warren Avenue, between Miller Road and Lonyo Road, is a Polish community adjoining one of Detroit's Polish sections. Near by is a sprinkling of the old Russian aristocracy, refugees from the Russian Revolution of 1917.

The various racial groups have their own clubs and societies, some vigorously concerned with local politics. Tendencies toward undue segregation are met by a community movement to organize immigrants in groups that are trained in American citizenship. Prominent in this movement is the Cosmopolitan Club of Dearborn, organized in 1931 with objectives and policies similar to the Cosmopolitan Women's Club of Detroit, established in 1921. Both clubs are organized on a group basis, with membership in each unit limited to women born in a particular foreign country. Each club has two American groups. The Dearborn club, with 40 members, represents nine groups of foreign-born women. Its annual fair, a pageant of art, handiwork, and cookery characteristic of the nationalities represented, is held each year in different sections of the city.

The site of Dearborn was ignored by the Indians and the French during Cadillac's regime at Detroit in the early eighteenth century; the Potawatomi established their village along the Detroit River, and the French did not stray far from the protection of the garrison. When the threat of Indian warfare abated, following Pontiac's defeat at Detroit in 1763, the French moved inland and established farms along the Rouge. When Captain Moses Porter took possession of Detroit for the American forces in 1796, John Cissne had been farming on the Rouge nine years. Among the first Americans to settle in Dearborn were A. J. Bucklin and the Thomas brothers from Ohio, former army scouts, whose homesteads are part of the present Ford estate. An influx of settlers following the War of 1812 led to the establishment of Pekin, Greenfield, and Springwells Townships, all now included in Dearborn. Pekin Township, later called Dearborn, then Bucklin, was renamed Dearborn to honor General Henry Dearborn (1751-1829), secretary of war under President Andrew Jackson. The influence of occasional missionary pilgrimages from the eastern States was shown in 1818, with the construction on the River Rouge of one of the first Protestant churches in Michigan. Although illness of the builder, a Detroit pastor, interrupted the work, the rude log structure was completed and used as a schoolhouse until it burned in 1830.

Homesteaders who outfitted in Detroit usually set out on the westward trek in the early morning. Soon they were hub deep in sticky mud or floundering over corduroy roads, for between Dearborn and Ypsilanti the Great Sauk Trail—now Michigan Avenue—led through

a wet, elm-shaded plateau called 'Thirty Mile Swamp.' Nightfall generally found the weary travelers at Conrad 'Old Coon' Ten Eyck's Tavern, one of the most historic hostelrys in the southeastern section of the State. The spacious building stood opposite the present entrance to the Ford estate, with barns and stables across the road. 'Old Coon' usually welcomed the travelers in person, shouting to his wife: 'Sally, put on some more wolf steaks.'

The joke about wolf steaks was one of the genial host's stock pleasantries, perhaps intended to impress the younger pioneers. According to local legend, a particularly pretty girl leaving the dining room asked, 'And have I really had wolf steak?' On being assured that she had, she exclaimed, 'Then I suppose I am a wolverine?'

'That you are,' responded the landlord, 'and will be from this day on!'

The name stuck. Settlers called themselves 'Wolverines,' and some Dearborn residents assert that this was the origin of the nickname 'Wolverine State.'

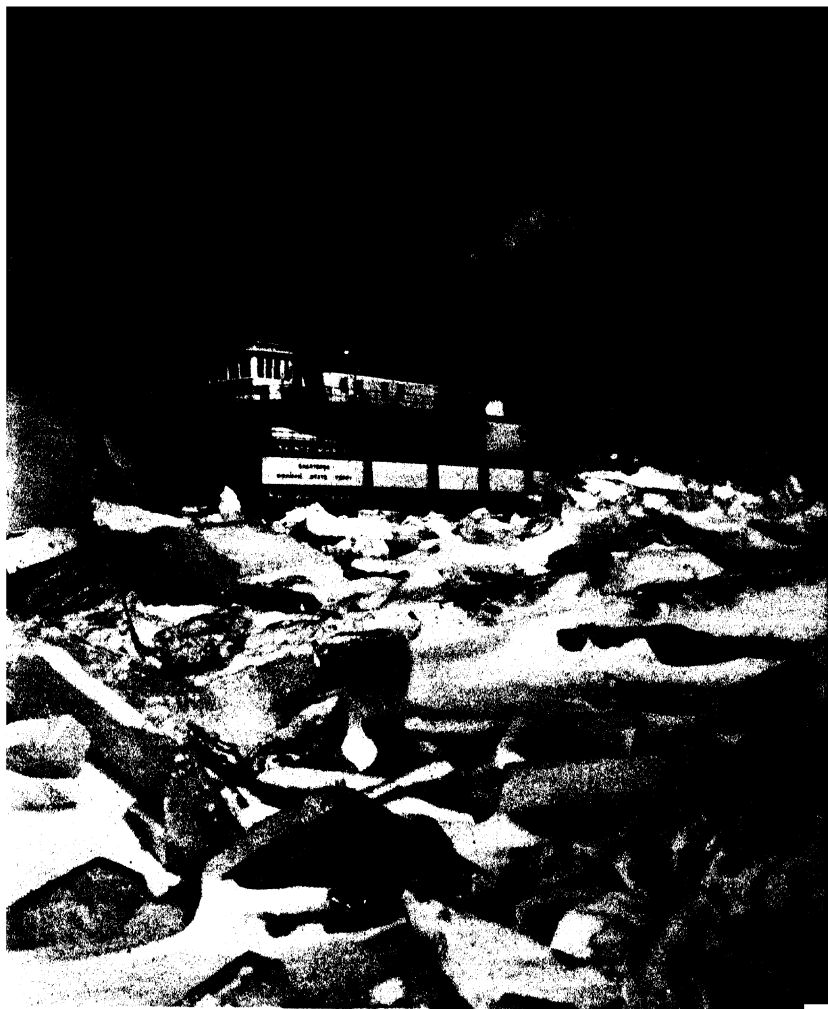
At the insistence of Father Gabriel Richard, congressman from Detroit and the only Catholic priest ever elected to Congress (*see Detroit*), \$10,000 was appropriated in 1824 for the survey of the Great Sauk Trail between Detroit and Chicago; the following year, Father Richard obtained an additional \$3,000 for this work. It required seven years to complete the road, which, in 1835, became a stage route through Dearborn, Ypsilanti, Saline, Jonesville, Coldwater, and Niles to Chicago, following the route of present US 112. Originally known as Chicago Road, the section within the limits of Detroit and Dearborn is now Michigan Avenue.

The Congress of 1832 authorized the removal of the Detroit arsenal to Dearborn as a munitions depot for the militia and military posts of the Territory. At its completion in 1837 it consisted of 11 brick buildings, arranged around a 360-foot square. The arsenal served as an army base until it was abolished in 1875.

Bricks for the arsenal were made by Titus and Josiah Dort in 'The Mud Hole,' a short distance from the Ten Eyck place. Josiah opened a general store in Inkster, and later was Dearborn's first postmaster and first agent of the Michigan Central Railroad. His son, Josiah Dalles Dort, while clerking in a hardware store, met William Crapo Durant, who was building houses in Flint. Durant was interested in a patent road cart, and the two began manufacturing them. Soon they were making a variety of vehicles. When the automobile came into use, the Durant-Dort Carriage Company's 14 plants in the United States and Canada were producing 75,000 vehicles annually. The rest of the carriage company's story is linked with the development of the automobile (*see Flint*).

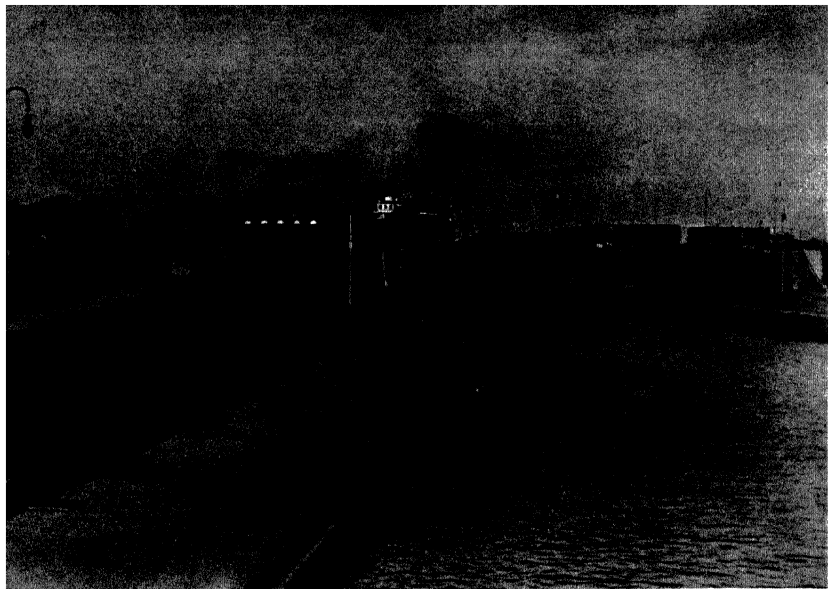
In 1837, the Michigan Central Railroad was built through Dearborn, and a settlement was established in Springwells Township, between Dearborn and Detroit. By 1860 the population of Springwells had grown to 1,516. Within a few years after the Civil War this figure had

The Great Lakes: II



Photograph by courtesy of Michigan Highway Department

BREAKING THROUGH THE ICE JAMS IN STRAITS OF MACKINAC



Photograph by Carl McDow

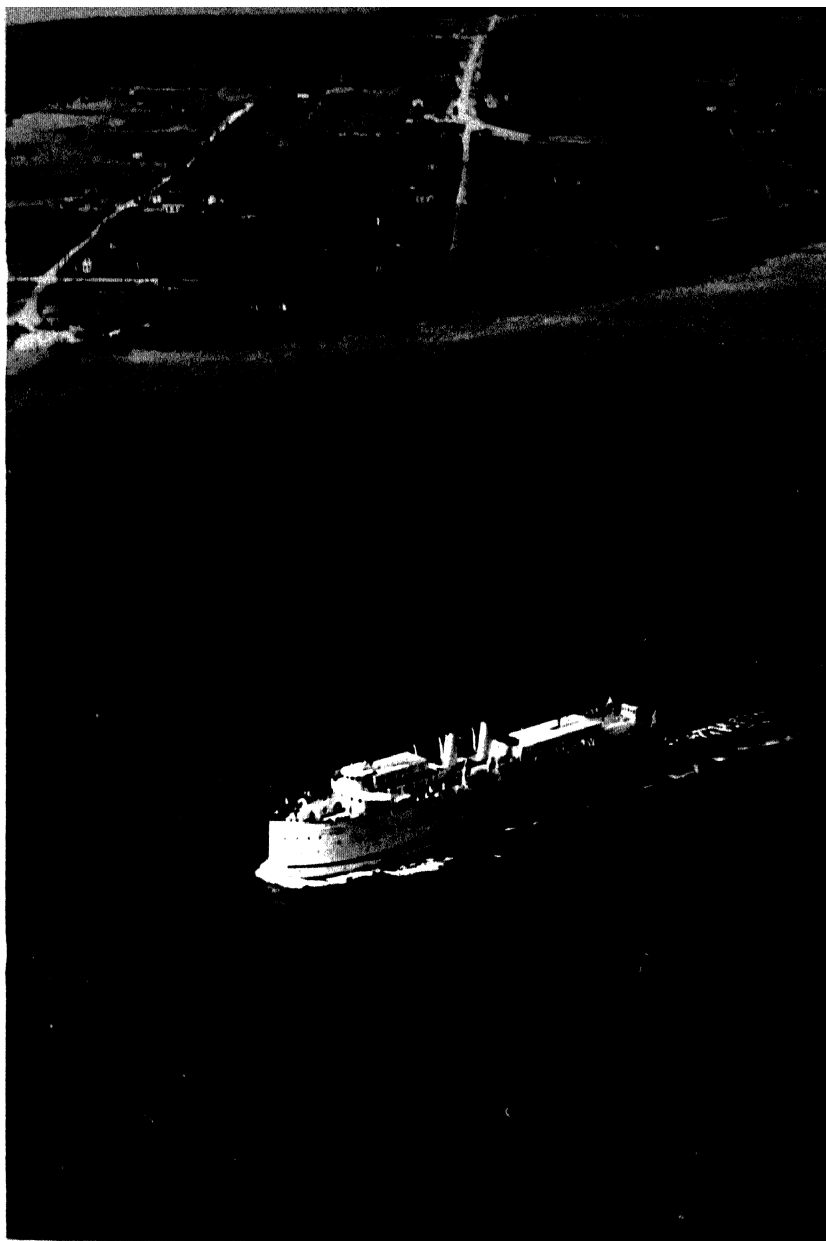
LOCKS AT THE 'SOO' SAINTE MARIE

Great Lakes shipping passing through these locks amounts to three times the annual tonnage carried through the Panama Canal.

FREIGHTER IN A 'SOO' SAINTE MARIE LOCK

Photograph by Wilson; courtesy of Work Projects Administration





Photograph by courtesy of Michigan Highway Department

**FERRYING AUTOMOBILE TRAFFIC FROM UPPER TO LOWER PENINSULA
THROUGH STRAITS OF MACKINAC**



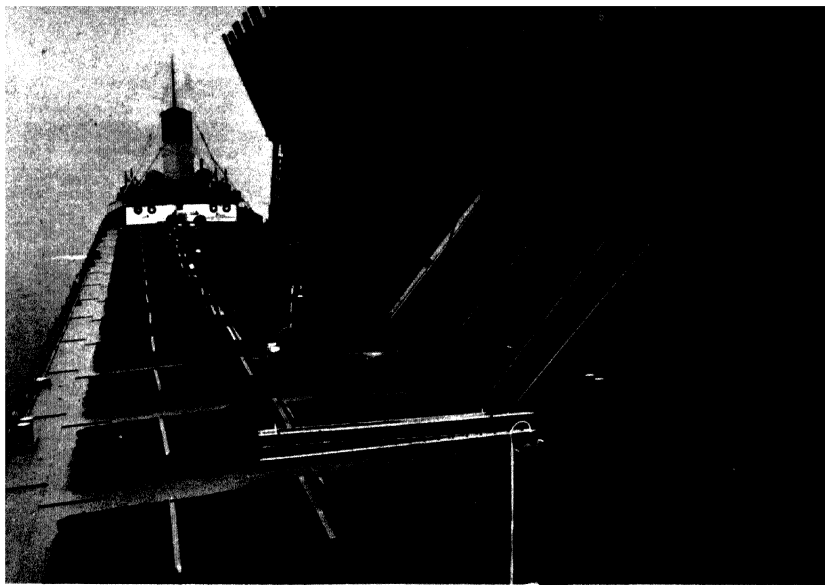
Photograph by courtesy of Ford Motor Company

UNLOADING IRON ORE AT RIVER ROUGE AUTOMOBILE PLANT

GREAT LAKES FREIGHTER UNLOADING COAL

Photograph by Wilson; courtesy of Work Projects Administration



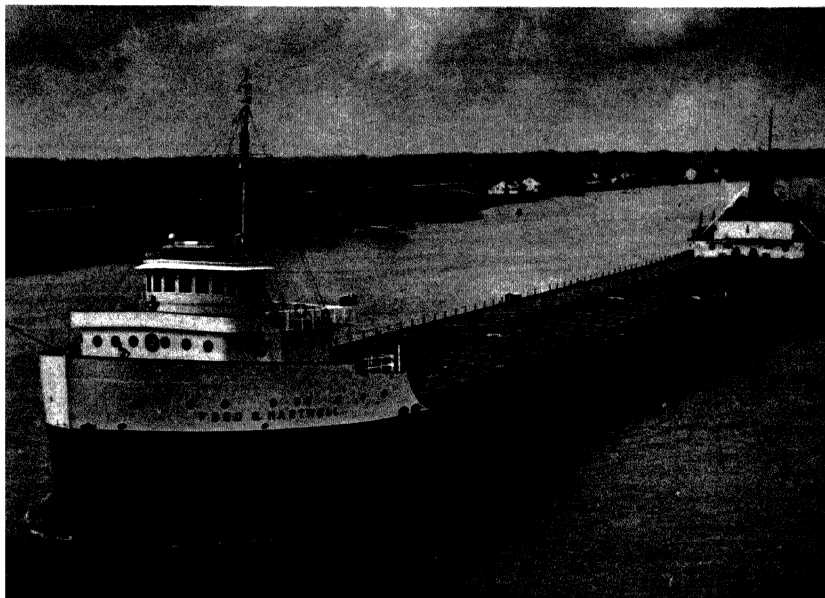


Photograph by Edward Dreier

LOADING IRON ORE INTO BULK FREIGHTER AT MARQUETTE

ONE OF THE LARGEST ORE CARRIERS ON THE GREAT LAKES UNDER WAY IN ST. CLAIR RIVER

Photograph by Carl McDow



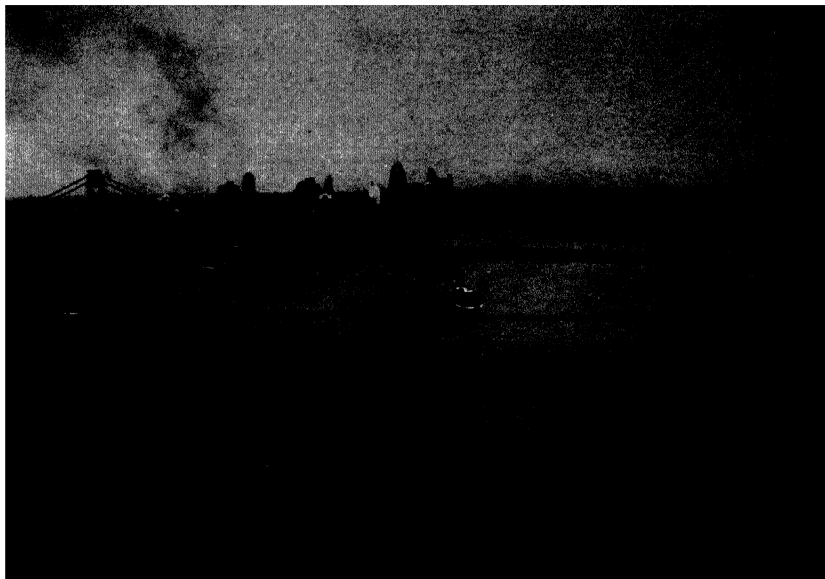


LOADING A LAKE FREIGHTER

Photograph by courtesy of Detroit News

DETROIT-WINDSOR (CANADA) INTERNATIONAL TUNNEL UNDER THE DETROIT RIVER





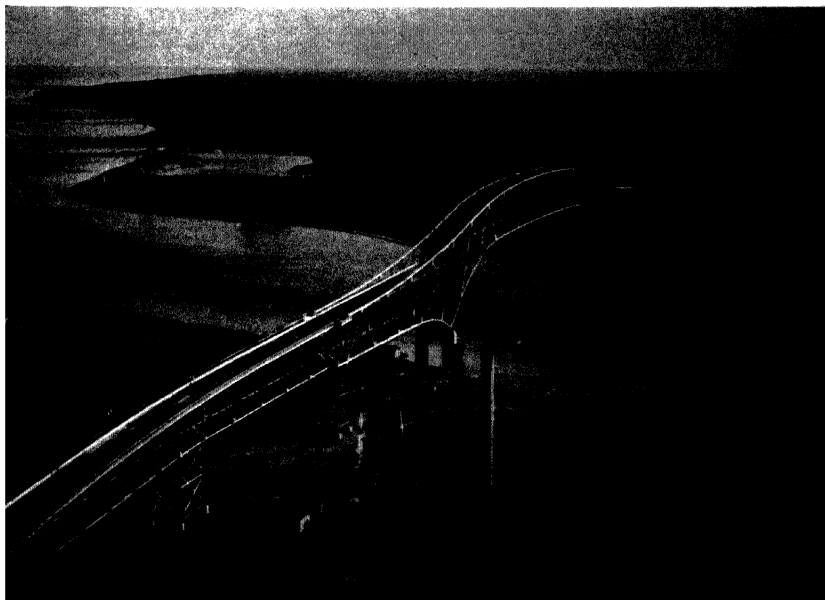
Photograph by courtesy of Detroit News

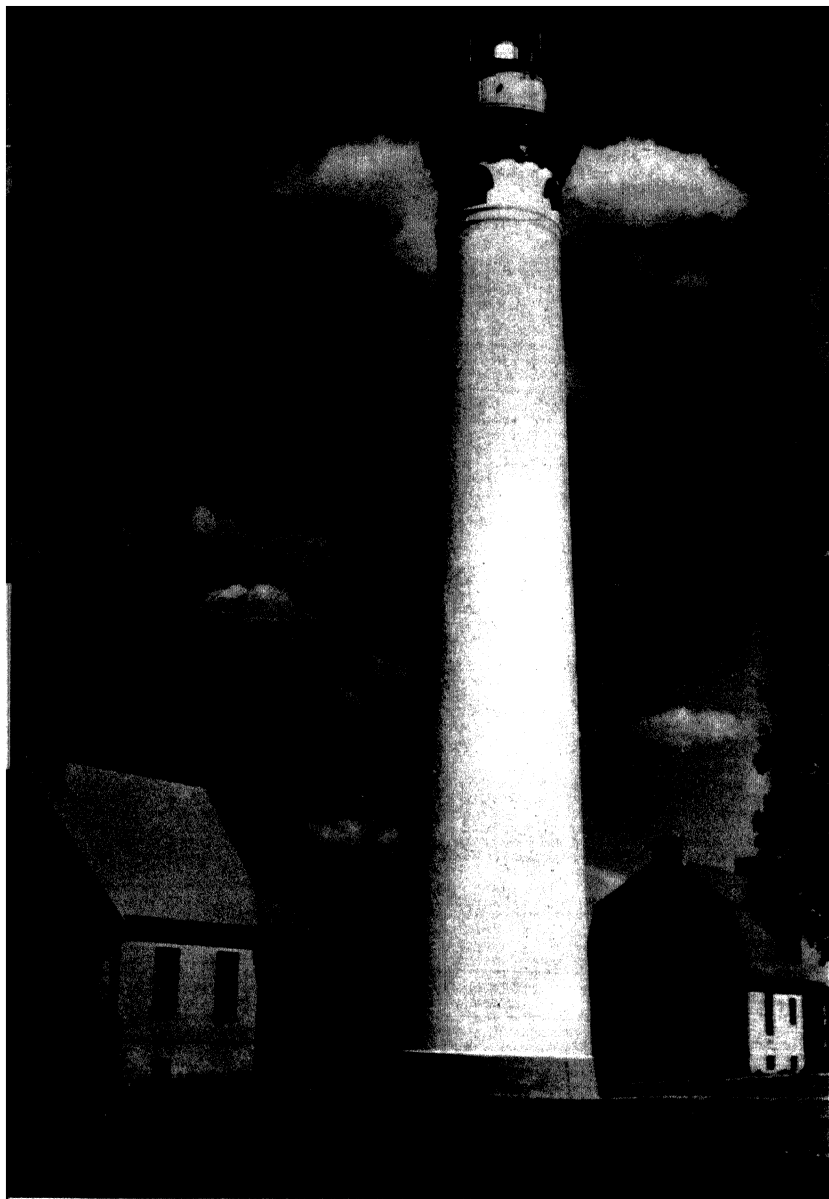
AMBASSADOR BRIDGE, DETROIT

This span over the Detroit River connects Detroit with Windsor, Canada.

**BLUE WATER BRIDGE OVER ST. CLAIR RIVER, FROM
PORT HURON TO CANADA**

Photograph by courtesy of Detroit News





PRESQUE ISLE LIGHTHOUSE, LAKE HURON

Photograph by courtesy of Detroit News

been doubled. A peak of 7,086 was reached in 1880, but decline set in thereafter, as Detroit annexed the eastern and northern edges of the township. The building of the Ford ship plant on the Rouge, within the limits of Springwells, and the expansion of the company, which moved its plants from Highland Park after the first World War, changed the picture. The settlement became a village and, in 1923, was incorporated as the City of Springwells. Two years later, the name was changed to Fordson. The village of Dearborn, incorporated in 1893, was established as a city in 1925; in 1928, Fordson and Dearborn were united as one municipality.

In the decade 1920-30, a period of intensive development of the Ford Industries, the population of Dearborn bounded upward to more than 50,000, an increase of slightly less than 2,000 per cent. Dearborn became the fastest-growing community in twentieth-century Michigan.

Dearborn is divided into three school districts, each with a board of education based upon the pre-merger boundaries of Dearborn and Fordson. The Fordson District was organized in 1921, when a one-room school at Warren Avenue and Wyoming Road and two two-room schools—all elementary—constituted the system. Each year between 1921 and 1927, the school population more than doubled. A survey of the Fordson District schools in 1930, based upon the language spoken in the home, showed 49 nationalities represented. The school census for this district is approximately 10,000.

The middle section of Dearborn, covered by the Ford estate, supports the only school in District 5. District 7 includes seven schools of Old Dearborn and six schools operated separately under Ford auspices. Four of the latter are grade schools in Greenfield Village; the Edison Institute High School and the Edison Institute of Technology, a technical school for high-school graduates, are in the Institute. A noncompetitive system that gives each child beyond the third grade the opportunity to develop individual talent has been established in the Greenfield Village schools. Edison Institute pupils are selected from a cross section of the public schools in District 7. About 1,800 pupils of the Dearborn public schools receive weekly instructions in old-time dancing, with music and instructors supplied by Henry Ford.

Dearborn's first newspaper, the *Dearborn Independent*, was established in 1900. After Henry Ford bought it in 1918, it became an international magazine with a circulation that exceeded 1,000,000 copies. A lawsuit in 1926, precipitated by a series of anti-Jewish articles, was settled out of court when Ford disclaimed knowledge of the articles or any personal animus against the people to whom they referred. In 1928 the paper was discontinued, but, by permission of Mr. Ford, who retained ownership of the title, the *Fordson Independent*, one of the city's dailies, changed its name to the *Dearborn Independent*.

The First Methodist Episcopal Church had its beginning in the State's first Methodist Episcopal circuit meetings held in 1804, although the church was not established until some time afterward. Thirty years later a second church, the First Presbyterian, was or-

ganized. Dearborn's older religious institutions include Sacred Heart (Roman Catholic), 1842; Evangelical and Christ (Episcopal), 1860, and St. Paul's Evangelical (Lutheran), 1871. Today (1940), 26 churches and 17 denominations are represented.

THE FORD INDUSTRIES

The story of Dearborn is inextricably bound up with the life of Henry Ford, who was born in 1863 in the homestead of William Ford, on the southeast corner of what are now Greenfield and Ford Roads. Ford's boyhood time was devoted to farm chores, school, and tinkering with machinery. Three years after his mother died, when he was 16, young Ford walked to Detroit and got two jobs—one for daytime and one for evenings.

Ford's interest in combustion engines began in 1885, when, as a young man of 22, he repaired a German-made Otto engine at the Eagle Iron Works in Detroit. That same year he met Clara Bryant at a rural party. Following this meeting, Ford gave up his job, returned to his father's farm, and courted Miss Bryant for three years. They were married April 11, 1888. During those years, Ford not only studied the Otto gas engine in his spare time, but also spent many evenings traveling about the countryside repairing and selling watches. It was while engaged in the latter pursuit that he evolved a plan for manufacturing watches to sell for a dollar—in days when a watch was a \$30 luxury.

Ford entered the lumber business while continuing his experiments with the gas engine. He succeeded in building a one-cylinder motor with a three-inch stroke, based on the same principle as the Otto engine. He returned to Detroit in 1889 and obtained employment as an engineer for the Edison Illuminating Company (Detroit Edison Company); at night he experimented with the newfangled horseless carriage in a workshop at the rear of his home on Bagley Avenue, where the Michigan Theater now stands. In 1893, a year after the historic appearance of the Duryea machine, Ford came out with his first practical motorcar. A two-cylinder model on 28-inch wheels, it resembled an old-fashioned buggy. The contraption ran so well that the Detroit Common Council was forced to pass the city's first motor traffic regulation, and Ford became America's first licensed chauffeur. In 1896, he sold his original model for \$200, after running the car 1,000 miles; a few years later, he bought the machine back as a curio.

Ford revealed marked ability in his work for the Edison Illuminating Company. Alex Dow, president of the firm, soon made him chief engineer at the salary of \$125; later, Dow offered him \$40 a week if he would abandon experiments on that 'invention' and devote full time and energies to the company's interests. In reply, Ford quit his job. The Detroit Automobile Company was organized in 1899 with Ford, who held a small parcel of stock, as manager and chief engineer. The engines were manufactured by the Leland & Faulconer Company (*see Lincoln Motor Car Plant, Detroit*), and parts were made in other

shops; the company's plant was used chiefly for assembly purposes. Ford and Henry M. Leland, of Leland & Faulconer, could not agree on engine principles, among other things, and after three years Ford resigned his position, taking his unorthodox motor with him, as well as \$1,800 received from the Detroit Automobile Company for a carburetor he had devised. Later that year, the Henry Ford Automobile Company built and displayed the Ford-Tom Cooper racing car, a speedster that attracted wide attention in sporting circles. On June 12, 1903, when Ford was 40, the Ford Motor Company was organized with a capital stock of \$100,000 (of which \$28,000 was paid in), the charter carrying a provision that no stockholder could sell his shares without first offering them to other members. Of the 13 shareholders in the firm, no one person held a controlling interest; Ford himself, who acted as vice-president, designer, master mechanic, and general manager, retained but 25½ per cent of the stock. However, his banker, Alexander Y. Malcomson, owned a similar interest, and together they had power to control the company's policies.

Ford produced 5,002 cars in three years, including the famous racer '999' that broke the mile record on the ice of Lake St. Clair in 1904. In 1907, the firm built 14,887 cars that netted more than \$1,000,000. The major part of the profit went to Henry Ford, who by this time had acquired the stock of Malcomson and a few smaller holders, giving him altogether a 58½ per cent interest. In the following year, the stockholders realized 10,000 per cent profit on their investment. The condition of the company was such that, in 1909, William Durant, the organizational genius of Flint (*see General Motors Building, Detroit*), took an option on the holding for \$8,000,000 and would have combined the Ford interests with General Motors, had he been able to raise the sale price in cash. After the failure of the Durant deal, Ford ignored further offers from financiers and concentrated on building 'a car for the multitudes' by mass production. Thereafter the growth of the company to a billion-dollar concern, paying investors up to 300,000 per cent in profits, was continuous.

Because Ford, as one of the first auto magnates, gathered a pioneer's share of fame and wealth from the manufacture of automobiles, it is often thought that he was the first American to conceive the idea of a gas-motored vehicle or, at least, the first to build and operate a practical car on the highway. Such is not the truth, although he was among the five men who founded the industry in the United States. In the same year that young Ford went to Detroit (1879), George B. Selden of Rochester, New York, applied for a patent on an internal combustion hydrocarbon engine to serve as the motive power in 'a road vehicle.' Selden then built a motor of this type that worked well in experiments, but, as he failed to interest capital, the engine was never installed in a carriage. The patent was kept in force, however, and an interest in it was sold to a Wall Street capitalist, who later levied a tribute on Ford and other motor manufacturers.

From the outset, Ford, like the rest of the industry, was harassed

by owners of the Selden patent, who claimed priority rights to the idea and relative theories of the automobile engine; but, while other manufacturers banded together and paid a burdensome tribute, Ford, aided by James Couzens, later United States senator from Michigan, defied the patent crowd. In a meeting with their representatives, Couzens, in his most pugnacious voice, said: 'Selden can take his patent and go to hell.' Ford arose, pointed a finger at the leader, and added: 'Couzens has answered you.' A period of legal complications followed for the Ford Motor Company, but eventually the patent owners were defeated, when it was shown that Selden's motor was of the brayton type, while Ford's engine was modeled after the Otto gas motor, which Selden had described in his diary as a 'damned Dutch engine.' Freed from this pernicious tribute, the entire industry entered an era of expansion; but the individualism of Ford, who had been embittered by his experiences, became more marked than ever. He would not join the automobile associations, because members had refused to aid him in his legal battle with the patent owners, and he had acquired a hatred for 'Wall Street,' because 'eastern financiers' had supported Selden in his scheme.

Ford moved his plant from Detroit to Highland Park in 1909 (*see Highland Park, Detroit*), and this plant, eventually covering an area of 180 acres, became the largest automobile factory in the world. Production continued to increase as publicity, resulting from his individualistic methods of business, made Ford a national figure. The millionth car was driven from the assembly line December 10, 1915.

In 1917, Ford began developing a plant on the River Rouge in Dearborn, where 'Eagle Boats'—small iron ships designed by the United States Navy to combat submarine warfare—were built and launched. At the close of the war, the firm, concentrating entirely on Model T cars and Fordson tractors, had a net income of \$71,000,000 a year. Improved manufacturing methods and the need of space led Ford to move his entire plant from Highland Park to the River Rouge site. On May 15, 1921, the five millionth Model T was produced.

In 1923, Ford celebrated his sixtieth birthday by manufacturing 7,000 cars in one day, and on June 4, 1924, the ten millionth Model T was driven from the plant with great ceremony. The outstanding year in Model T history was 1925, when approximately \$1,000,000,000 was paid in wages in all branches of the Ford organization. Although the fifteen millionth car was produced the next year, the annual production graph showed a sharp downward trend, and by Christmas 200,000 men were out of work, awaiting Ford's resumption of operations. The public, which had purchased 2,000,000 Ford cars annually in 1923, 1924, and 1925, was no longer interested in the Model T. The saturation point had been reached for this type of car. As it became evident that the change was permanent, plans were laid for a new car along conventional lines. These plans were announced May 25, 1927, and six months later the new car, the Model A, was on the market. In that period, 40,000 production machines were changed,

and much additional machinery for tool-making was installed in the factory.

Model A production showed a net profit of \$81,797,861 in 1929, and \$44,460,823 the following year, despite the market crash and depression. In 1932, however, the Model A cycle ended, and the V-8 series was introduced at a cost in plant changes of \$128,447,644, spread over a period of two years. The V-8 models were a success, but the company, profiting from past experiences, has annually made changes in designs and introduced technical improvements that have kept its products modernized and abreast of the industry. In 1938, Ford bid for business with five cars covering every major automobile price class—the Ford 60, Ford 85, Mercury, Lincoln-Zephyr, and Lincoln.

The Ford Motor Company, General Motors Corporation, and Chrysler Corporation are the three largest producers in the automotive industry in the United States. General Motors, accounting for 39 per cent of all new motor cars and trucks sold in the United States, is the largest producer; Chrysler ranks second with about 25 per cent, and Ford is third with about 23 per cent. It is pertinent to note, however, that, while General Motors has many subsidiaries and more than a third of a million stockholders, and is a corporation with myriad ramifications, as is Chrysler Corporation, the Ford Motor Company is owned by one family. Henry Ford has always remained at the apex of his company, which exemplifies the vertical method of industrial control, of which Ford is one of the world's leading exponents. Under this system, the control of the entire process of manufacture from raw material to finished product, even the sale to the consumer, is vested in one individual.

Ford's belief in man's dependence on the soil was expressed in May 1935, when he organized the National Farm Chemurgic Council in Dearborn (Chemurgic—from an abbreviation of 'chemistry' and the ancient Greek *ergon*, or 'work'). The Council, which transferred its headquarters to New York in 1937, is composed of more than 300 prominent scientists, industrialists, and agriculturists, who are co-operating in an effort to find new markets in industry for farm products. Typical of this aim are Ford's experiments with the soy bean, which have developed new relationships between agriculture and the Ford industries.

Envisaging the need of decentralization of big industry, Ford has inaugurated a program of smaller plant units located nearer to points of raw materials and at water-power sites. Small plants in Michigan are at Northville, Flat Rock, Saline, Ypsilanti, Nankin Mill, Plymouth, Phoenix, Iron Mountain, and elsewhere. Factories abroad are in Ireland, England, Germany, France, Holland, Belgium, Cuba, Japan, Brazil, Uruguay, China, and the Canal Zone.

Ford adopted the \$5 minimum wage for eight hours in 1914, and in 1919 increased the minimum to \$6 a day. The five-day week was established in 1926. In 1929, just 37 days after the Wall Street crash, the minimum day wage was increased to \$7, and this rate was main-

tained until November 1931. Ford refused to sign the N.R.A. code and resisted governmental interference with his wage schedules. Frequent adjustments of the wage schedule reduced the day rate as low as, but never below, \$4. The \$5 day was restored in March 1934, and in May 1935 the \$6 day was re-established. Statistics show that approximately 30 per cent of the men employed are more than 40 years of age, and 10 per cent more than 50 years of age. At the peak of production, 88,000 men were employed at the Rouge. The staggered timekeeping system makes every weekday except Saturday a pay day. Men are paid in cash every two weeks.

The conveyor system, which is used exclusively, has created a division of labor to the point of requiring a single continuous function of each worker. Crude ore is converted into the finished product in less than 36 hours. A 142-mile system of conveyors, connecting plant with plant, makes it possible for 70,000 men to produce 6,000 automobiles each 24-hour day. These must be moved off the grounds at once or the plant could not operate.

The Ford educational system, based on the theory that men learn better from actual experience than from books, was introduced in 1916 with the establishment of the Henry Ford Trade School at Highland Park, with six boys and one instructor. The system has been expanded to include 23 schools in three States—Michigan, Georgia, and Massachusetts.

The Ford Trade School in Highland Park continued operating after the factory was moved to Dearborn, and a second school was established in 1927 at the Rouge Plant, where both were merged in 1930. The school has an average enrollment (1940) of 1,700 pupils between the ages of 12 and 18. It is a nonprofit enterprise, covering three acres of floor space in the Final Assembly Building. The pupils are divided into three groups, each of which spends one week in academic and two weeks in shop work. No attempt at college preparatory work is undertaken. Pupils are given \$8 a week on entry and may earn as much as \$26 a week, as they progress. To encourage thrift, each boy receives \$2 monthly to be deposited in a bank. The minimum a pupil can earn is \$475 annually; the maximum is \$1,400. Graduates from the trade school who have shown unusual ability may enroll in the Ford Apprentice School, which offers courses in steam engineering, metallurgy, metallography, mechanical drawing, and mathematics.

In June 1935, the Ford Motor Company opened the Ford Training School for a limited number of recent high-school graduates unable to find employment. During the three-months training course, the students receive \$22 a week; if they show fitness, they may be offered work in the Ford Motor Company. In memory of Thomas A. Edison, students issue a bimonthly newspaper, the *Herald*, its banner head the same as that used by Edison when, as a railway newsboy, he printed a paper while making runs on the train (see *Port Huron*).

THE FORD PLANT

The FORD ADMINISTRATION BUILDING (*not open to public*), Schaefer Rd. and Airport Drive, three-fourths miles S. of Michigan Ave., houses the world-wide administration of Ford Industries. The four-story building, of reinforced concrete faced with white limestone, contains the offices of Edsel Ford and company officials; the office of Henry Ford is in the Engineering Laboratory. On the fourth floor are a cafeteria, private dining room for executives, and recreation rooms.

The FORD-ROUGE FACTORY covers an area of 1,096 acres and is arranged by plants in a conveyor system of continuous progressive assembly. Two major groupings are necessary for this production: one for the intricate motor and the other for the heavier steel-body constructions and assembly. Both conjoin in the Final Assembly plant that stands between these two. Power houses, coke ovens, a safety glass plant, tire factory, soy bean mill, the cement plant, and numerous others make up this extremely complex yet perfectly unified industrial city.

ROUGE PLANT TOUR

The only public entrance is at the Rotunda, from which tours through the plant leave by bus every half-hour from 9 A.M.-3 30 P.M., Mon-Fri., except holidays. Courtesy cars are also provided for trips to the Edison Museum and Greenfield Village. Until 2 P.M., the trips through the plant take two hours, the trip at 2.30 P.M. lasts one and one-half hours, and at 3 P.M., as the plant gradually closes down, an hour's trip is started; at 3.30 P.M. a tour of the grounds is conducted.

The FORD ROTUNDA (*open 8:30 A.M.-10 P.M. weekdays*), across Airport Drive from the Administration Building, is cylindrical in plan and modernistic in outline, resembling four different-sized gears, one above the other. Its height is equivalent to ten stories and, having no windows, it is illuminated by a central skylight and inner glass walls. At night the upper setbacks are illuminated with changing varicolored lights. Inside, around the circular front wall, photographic murals 600 feet long and 20 feet high depict the Rouge Plant in all its activities. In the center, a revolving globe 20 feet in diameter indicates the international scope of the Ford Motor Company. The south wing is a completely equipped theater with a seating capacity of 500, used both to show industrial motion pictures and as a meeting place for conventions and various groups. The north wing is an exhibition hall, with a large map of Michigan and the surrounding territory, on which Ford subsidiaries, mines, forests, and shipping are marked. A 3,700-foot roadway outside the Rotunda is composed of sections that illustrate the design and materials of 19 famous highways, in ancient Rome, France, Belgium, early America, China, Japan, India, and present-day America.

At the CANAL SLIP, which was formed by dredging, deepening, and straightening the River Rouge, Great Lakes freighters and ocean trans-

ports unload cargoes of ore, coke, and limestone, used in the production of Ford cars. The iron ore and other raw materials are transferred to primary bins by cranes. Car bumpers running along the 'High Line'—five elevated railroad tracks 40 feet above the ground that operate for a distance of three-fourths of a mile—transfer the materials to active bins below, which have a capacity of 2,000,000 tons. From here they are hauled to the blast furnaces by a skip car climbing from the active bins.

The BLAST FURNACES, below the 'High Line' and east of the storage bins (and canal slip), produce high silicon iron which, when white hot, flows into ladle cars and is transported to the Foundry, first plant of the Motor Assembly group, and to the Open Hearth, which is the key plant of the Body Group. At the Foundry and Open Hearth, other metals are added, converted into castings, and developed into 52 kinds of steel. Impurities in each charge of the blast furnaces are transferred to the Cement Plant to be converted into cement. Dust of the charge is salvaged by suction conveyors that carry it to the sintering plant to be mixed with steel and iron borings and converted into heavy lumps, which are remelted easily. The gas is cleaned and filtered to remove dust. Part of this gas is used to pre-heat each plant; the remainder is piped to the power house, where it is used as fuel.

The Motor Construction and Assembly: In the FOUNDRY, considered the largest and most complete of its kind in existence, covering 30 acres, the V-8 cylinder block is cast in a single piece—a difficult engineering feat. Crankcases, camshaft bushings, flywheels, transmission covers, nickel plating, truck gears, and bronze bushings of the V-8 type are also prepared in the Foundry.

The castings are dispatched to the FOUNDRY MACHINE SHOP, adjoining the Foundry and Motor Buildings, where they are finished. Also included in the machine shop and motor assembly units is the machine repair shop for factory maintenance.

The rough cylinder blocks are received at the machine shop and conveyed through many machines that bore, ream, face, drill, chamfer, inspect, and clean. On reaching the assembly line in the Motor Building, the block is taken from the conveyor for inspection and correction.

In the MOTOR BUILDING, additional thousands of parts necessary to the V-8 motor, including gaskets, valves, manifold pins, bolts and washers, oil pump, etc., are added and adjusted, as the block travels through the building from department to department. At the end of the building, the assembled motor is given a series of tests, stamped with a number and sent to the Shipping Department or Final Assembly Plant.

Body Construction and Assembly: Molten iron from the blast furnaces is received in the OPEN HEARTH BUILDING. Located west of the canal slip are ten open-hearth furnaces, with a combined capacity of 1,300 tons. Here the iron is heated and blended to the proper degree and poured into large molds to be taken to adjoining Steel Mills.

The ROLLING MILLS in the steel mills have departments for rolling

steel, forging, chipping billets, making rear-axle housings, ring gears, wire drawing, frame assembly, car salvage, and a score of other processes.

The **PRESSED STEEL BUILDING**, across the road from the rolling mills, occupies nine acres. Nine large overhead cranes move the sheet metal into the building; here it is fed into 2,400 punch presses, some with dies weighing 30 tons, and pressed into fenders, hoods, gas tanks, radiator shells, body panels, doors, fans, and smaller parts. More than 3,000,000 pounds of steel are used daily.

The **SPRING AND UPSET BUILDING**, east of the pressed steel plant, houses forging and upset forging machines equipped with huge steam hammers, spring forming machines, and gas and electric furnaces for heat treating. Crankcases, front spindles, spring leaves, hub and break drums, hub caps, and steering rods are among the parts produced in this building.

All major conveyors lead to the 'B' or **FINAL ASSEMBLY BUILDING**, where the finished car receives final adjustments and inspection. Formerly the home of the Fordson Tractor, the Final Assembly Buildings also houses the laundry, fire department, machine repair, engineering and drafting division, a grease and soap manufacturing department, the Henry Ford Trade School and Apprentice School, and the main hospital, which serves both Ford factory workers and residents of Dearborn.

The **SOY BEAN PLANT**, adjoining 'B' Building to the west, demonstrates how industry can help the farmer by consuming farm products. The plant, representing a typical small-town installation, is a complete unit even to automatic production of power. About 10,000 acres are required to raise the 210,000 bushels of beans this unit can process in 260 working days. Part of the beans used here are grown on Ford farms and part by independent farmers, all within a radius of 50 miles. The operation consists of extracting the oil from the bean by dissolving it with a special gasoline solvent. The meal is used as dry-sand core binder for foundry work, binder for hot tops in the steel mill, binder for charcoal briquets, and as a component in molding compound from which gear shaft knobs, distributor parts, and other products are manufactured. The oil is used as a constituent in enamel for cars and as an oil core binder in the foundry. The forming and finishing of molded parts of soy-bean meal is demonstrated in the glass plant.

The **GLASS PLANT**, adjoining the soy-bean mill, is operated on a continuous sheet-rolling process developed by the Ford Motor Company at Highland Park. Safety glass is also made here. Three-and-a-quarter-million cubic feet of coke-oven gas are used every twenty-four hours to melt the briquets of glass. The refined glass is passed through a series of cast-iron rolls and flattened into a sheet 48 inches wide and $\frac{3}{16}$ of an inch thick. In 24 hours this conveyor produces a ribbon of glass $3\frac{1}{4}$ miles long—enough to cover $1\frac{1}{2}$ acres. The rough surface of the glass is then polished and ground to transparency.

The COKE OVENS are fed ground or pulverized coal from charging cars that run along the top. Each oven is then sealed and gas flames applied. After the coal has been coked, an electric ram shoves the red-hot charge from the oven into a skip car. As it emerges, the coke bursts into flame. To keep it from burning to ash, the coke is doused in water at the quenching tower. The daily output of coke is 3,475 tons. By-products in the form of a thick, brown smoke are piped to the BY-PRODUCTS PLANT. By means of washing, condensing, and recovering operations, 45,000 gallons of coal tar, 100,000 pounds of ammonium sulphate, 52,500,000 cubic feet of gas, 11,950 gallons of light oil, and 42,000 gallons of motor benzol are produced every 24 hours.

Newest addition to the Rouge Plant is the TIRE FACTORY, planned to provide half of the Ford Company's tire needs. It is the first tire factory in which a finished tire is produced within three-and-a-half or four hours after the crude rubber is received. Freighters carrying rubber tie up to docks on the first-floor level. The bales—250 pounds each—are fed through plasticators and then sent to the top floor in conveyors. Other materials are either elevated or pumped to the top level. All of the ingredients of the tire are weighed and fed automatically into the production process at the proper time and in proper amount. After being run through a battery of mills, each tire is cured in an individual oven that pops open when the tire is finished. Peak production is 6,000 tires each eight-hour shift.

OTHER POINTS OF INTEREST

The GRAHAM PAIGE PLANT (*open during operations, tours at 10 and 2 by arrangement*), 8505 West Warren Ave., near Dearborn city limits, occupies a 45-acre site and contains three principal buildings—general offices, engineering building, and factory. The company, Dearborn's second largest industrial organization, manufactures an average of 33,341 automobiles each year and, when operating at full capacity, employs approximately 3,500 workers.

SPRINGWELLS FILTRATION PLANT AND PUMPING STATION (*open 8:30–4:30 Mon.-Fri.; tours*), 8500 West Warren Ave., is the second largest plant of its kind in the world, exceeded only by the Detroit Filtration Plant (*see Detroit*). This unit of the Detroit Department of Water Supply, costing \$6,500,000, was placed in operation in 1935 to supply the rapidly growing West Detroit and Dearborn sections. The wide concrete buildings, set in a 28-acre site, are low and massive. The seven divisions operate as a straight coagulation, sedimentation, filtration, and chlorination plant of the rapid sand type. Water from the lagoon in Lake St. Clair at the head of Belle Isle is pumped to the station, mixed with chemicals, settled, and filtered. After the bacteria are killed with chloride sulphate and ammonia sulphate, the water is clarified with aluminum sulphate. The filter sand is

thoroughly washed at 24-hour intervals. The maximum daily filtration capacity of the plant is 380,000,000 gallons.

HENRY FORD'S BIRTHPLACE (*private*), SE. corner of Ford and Greenfield Roads, is a modest structure, painted white and enclosed by a picket fence. A four-room house when William Ford built it for his wife, Mary Litoget, additional rooms were built as the family grew larger. Today it is restored and furnished as nearly as possible as it was during Ford's boyhood.

VETERANS' HOSPITAL, between Snow Road, Outer Drive, and Southfield Road, Georgian in design, is under construction on a triangular site of 37 acres donated by Henry Ford. The hospital is intended to serve veterans from Michigan and northern Indiana and Ohio. Total approximate cost has been set at \$1,500,000. The hospital will have facilities for 500 patients.

FORD AIRPORT (*not open to public*), almost in the center of Dearborn, bounded by Oakwood Blvd., Southfield Road, and Airport Drive, is more a proving ground for automobiles than an airport. Formerly a busy terminus when Ford was manufacturing aircraft, the tract is now an emergency landing field. The mooring mast for dirigibles, 210 feet high, its three legs anchored in concrete 71 feet apart, was the tallest in the world when completed in 1925. A five-passenger elevator ran to a height of 176 feet; a covered stairway reached to the operating platform just below the mooring device. This elaborate structure was used only three times. It was here on the morning of October 23, 1934, that Dr. Jean Piccard and his wife Jeannette, after weeks of preparation, entered the Dow-metal gondola of their stratosphere balloon (*see Midland, Tour 5*). They soared ten miles up and after five hours began the descent, which ended in the trees of a farm near Cadiz, Ohio. Dr. Piccard suffered a sprained ankle, and Mrs. Piccard was bruised. The bag of the balloon was badly torn, but the gondola and scientific instruments were not damaged. The flight was made to search for cosmic rays and to check the data obtained by Dr. Robert A. Millikan and Dr. William F. G. Swann at their camp in Mount Evans, Colorado.

The EDISON INSTITUTE OF TECHNOLOGY (*open 9-4 weekdays, 9:30-4:30 Sun. and holidays; adm. 25¢ for adults, children free*), Airport Drive near Oakwood Blvd., including the Institute, a museum, and Greenfield Village, occupies 200 acres set aside by Henry Ford as a tribute to his friend, Thomas A. Edison (*see Detroit*). The six Institute and Greenfield Village schools are organized under the Ford educational plan, directed by B. B. Lovett. Briefly, the plan consists in co-ordinating the academic with the practical, the city with the farm, the past with the present. The Institute, Museum, and Greenfield Village are directly part of the plan, for the buildings and exhibits, a living reminder of the past, are utilized by the students.

The entrance of the Edison Institute and Museum is through the central unit, **INDEPENDENCE HALL**, a reproduction of Independence Hall in Philadelphia. Directly ahead, inclosed in glass, is the Edison

Memorial dedicated on September 27, 1928, when Edison thrust the spade of Luther Burbank into wet cement, imprinted his footsteps, and inscribed his name. Left and right are buildings in the Georgian style, joined by a series of arcades and corridors. In the left group are the Edison Institute Theater and reproductions of City Hall and Congress Hall in Philadelphia; in the right group are the rooms and library of the Edison Institute of Technology. From the three units, corridors lead into the exhibition hall in the rear, which covers approximately eight acres. The hall is divided into three main industrial arts exhibits: the agricultural, including a textile display; manufacture, exemplifying the use of steam, combustion, and electricity; and the development of transportation. Arranged in chronological order, row upon row of farm implements, steam and gas engines, electrical machines, trains and automobiles unfold the machine age. Here is the living story of the struggle of man: the tedious and difficult labor shown by the wooden plow, the hand looms, and the hand churns of the pioneers; the emancipation of agriculture from drudgery by the advent of the steam engine, then of gasoline, and now of electrical power; the revolution of transportation by the gasoline combustion engine and the automobile—roads and highways uniting farm and city.

GREENFIELD VILLAGE, entered at the GATE LODGE right of Edison Institute, a brick structure in the Georgian style, can be visited by carriage or on foot. Centered in the 'green,' the village consists of a number of historical buildings. While the museum exhibits the tools and utensils of yesterday, the village completes the picture with the buildings in which they were used. The village school children, under competent instruction, utilize a number of the shops, mills, and foundries to master and perpetuate the old handicrafts so rapidly disappearing. In this manner, Greenfield Village, relic of the past, is functionally related to the present.

Here, too, is the distinctive Cotswold cottage group from the Cotswold Hills of England, used from A.D. 1500 to A.D. 1700 by shepherds. Here is the Lincoln courthouse, a two-story structure of black walnut, where Lincoln practiced law. In it has been installed the bloodstained chair in which he was assassinated, making vivid one of the greatest of American tragedies. Here is Menlo Park, the laboratory of Thomas Edison and the birthplace of the incandescent lamp and many other notable inventions. On a little hill surrounded by trees stands the Martha-Mary Church (nondenominational), Colonial in design, named after the mothers of Mr. and Mrs. Henry Ford. Chapel services are held every morning for the pupils of the village and institute schools. The McGuffey group of buildings includes the birthplace, old smokehouse, and school of William H. McGuffey (1800-1873), author of school readers.

HENRY FORD'S HOME (*private*), on Michigan Ave. between River Rouge and Southfield Road, stands in the center of a 7,000-acre estate along the river. The home, Fairhaven, is a stone structure so wide that it appears to be squat. The furnishings include a cathedral-

sized organ, a Mediterranean-blue natatorium, and a fireplace taken from a Colonial inn. The gardens include a fine wildflower collection.

The FORD ENGINEERING LABORATORY (*not open to public*), NW. of the Edison Institute, one block S. of Michigan Ave., is a two-story structure of white Bedford limestone, its façade ornamented with massive pilasters and columns. Henry Ford's office is on the first floor. The second floor is used for a library.

The HAIGH HOUSE (*private*), 22734 Michigan Ave., was built about 1833 by Colonel Joshua Howard, then lieutenant of U. S. Army Engineers and in charge of construction of the Detroit Arsenal at Dearbornville. Some of the old walls are three feet in thickness. The original house was of the general style of the Arsenal buildings, a sober Georgian Colonial with simple details, but in the course of time it became the stately mansion of today. Acquired by Richard Haigh about 1850, the exterior was refashioned in 1870 with a heavy-bracketed cornice; Richard's son, Henry A. Haigh, the present owner, rebuilt it after a serious fire in 1900. From that time stem the high four-columned Ionic portico with console cornice, the broad flight of stairs, and other features, designed by A. C. Varney, Detroit. The mansion has a distinguished and appropriate setting of great elms, hedges, and orchards.

FORD FIELD, a 20-acre amphitheater along the south branch of the River Rouge, was presented to Dearborn by Mr. and Mrs. Henry Ford. It has four baseball diamonds, a football gridiron, and picnic grounds.

The SITE OF THE DETROIT ARSENAL is bounded by Morley Ave. on the north, Mason St. on the west, Michigan Ave. on the south, and Oakwood Ave. on the east. The arsenal, which originally consisted of 11 buildings (5 of which are still standing), was used as a munitions depot from 1833 to 1875. The OFFICERS' HEADQUARTERS, Michigan Ave. and Monroe Blvd., of unpretentious Georgian-Colonial design, have been thoroughly remodeled within, to house the headquarters of Precinct No. 2 of the Dearborn Police Station. Farther west on Michigan Ave. the CANNON STOREHOUSE, Monroe Blvd. and Michigan Ave., where cannon and larger ordnance were once stored, is now a flower store. The SMITHY and PAINT SHOP, Garrison Ave. between Mason St. and Monroe Blvd., are temporary warehouses at the rear of the West Dearborn Branch Post Office. The GOVERNMENT WINE CELLAR, NE. corner Monroe Blvd. and Garrison Ave., is a private residence. At the E. end of Garrison Ave. on Brady St. is the POWDER MAGAZINE, now a private dwelling.

POINTS OF INTEREST IN ENVIRONS

Eloise Infirmary and Eloise Hospital, 5.5 m., Saline Valley Farms, 33.5 m., Irish Hills, 43 m. (*see Tour 1*).

Detroit

Railroad Stations: Grand Trunk Depot, foot of Brush St., for Grand Trunk Western Ry.; Michigan Central Depot, Fifteenth St. and Michigan Ave., for Michigan Central R.R., New York Central System, and Canadian Pacific Ry.; Union Depot, Fort St. and Third Ave., for Baltimore and Ohio R.R., Pere Marquette Ry., Pennsylvania R.R., and Wabash Ry.

Bus Stations: Greyhound Terminal, Washington Blvd. and Grand River Ave., for Greyhound, Blue Goose, Eastern Michigan, Canadian Greyhound, Chicago Bus Lines, Cincinnati-Louisville Lines, and Red Star Way Lines; De Luxe Motor Stages, 1505 Cass Ave.; Lake Shore Coach Lines, 11840 Edlie St.; Main Indian Bus Depot, 1229 Cass Ave.; Safe Way Lines, 1521 Cass Ave.; Cut Rate Bus Depot, 501 W. Grand River Ave.; Canadian American Trailways, Ltd., 2905 Cass Ave.

Airports: Detroit City Airport, Conner and Gratiot Aves., 5 miles NE of Detroit City Hall, for American Airlines, Pennsylvania-Central Airlines, Marquette Airline Service, Knowles Airways, Inc., Northwest Airlines, Maycock Flyers, Stinson Air Cab Charter Service, Transcontinental and Western Airlines, Inc., Thomas Bros. Air Service, and United Airlines, taxi fare, \$1.35, 25 minutes from City Hall; Wayne County Airport, Middle Belt and Goddard Roads, 16 miles SW of Detroit City Hall, for Stinson Aircraft, U S Army Reserve Base of 107th Squadron, charter service, private instruction, mail service, storage and transit service for planes, taxi fare, flat rate, \$3.00, 50 minutes from City Hall, Burns Airport, Plymouth Road, ¼ mile W. of Telegraph Road, for private instruction and sight-seeing flights; Erin Airport, State 97 at Masonic Blvd., N. of Roseville, for private instruction and sight-seeing flights; Hartung-Gratiot Airport, on Gratiot Ave. and Frazho Road, for aviation school and sight-seeing flights; Haggerty Field, Wyoming Ave. and Ford Road, Dearborn, for Leonard Flo Flying School and charter service; National Flying Service, 29701 Plymouth Road, at Middle Belt Road, for flying school, hangar space, and charter service; Grosse Ile Airport, on southerly tip of Grosse Ile, in Detroit River at head of Lake Erie, 21 miles from Detroit City Hall, for taxi service, Curtiss-Wright Flying Service, Triangle Field, Plymouth Road and Ann Arbor Trail, 20 miles NW. of Detroit City Hall, for flying school, taxi service, and sight-seeing flights; Ford Airport, Oakwood Blvd. and Village Road, 9 miles W. of Detroit, emergency landing field, oil, gasoline, and temporary storage.

Taxis: 1 or more passengers, 25¢ for first ⅔ mile and 5¢ for each additional ⅓ mile.

Streetcars: Fare, 6¢ cash or 5 tickets for 30¢. 1¢ to conductor for transfer on 1 or 2 additional car lines. 4¢ to conductor for bus transfer. To transfer to streetcar and bus line, upon payment of fare, procure a penny transfer and a 4¢ car-to-bus transfer from conductor. On all lines except E. Jefferson, Michigan, Woodmere and Baker, streetcar service is replaced by busses after 7:50 P.M. and on Sundays and holidays. Fares remain the same as on streetcars.

Local Busses: Fare, 10¢, or 1 Dept. of St. Rys. ticket (5 for 30¢) with 4¢ cash. Transfers to streetcar or busses free; transfer to one bus can be doubled for a second bus at no extra cost. If more than one streetcar is used, it is necessary to purchase a penny transfer on the first streetcar. Loop busses circling the shopping

district, to and from D.S.R. auto parking lots and on certain shuttle busses in outlying districts, fare 5¢.

Detroit-Dearborn Bus Service: Dearborn Coach Co., from Barlum Tower, Cadillac Square, to E. Dearborn, 10¢; W. Dearborn, 15¢; Inkster, 25¢; Eloise, 25¢; Wayne, 30¢; Dept. of St. Rys. busses operate between large downtown hotels and Michigan Central Depot, 15¢; Ford Administration Bldg., 15¢; Greenfield Village, 25¢; Dearborn Inn, 25¢. No transfers issued.

Detroit-to-Canada Service: Detroit-Windsor Tunnel, 200 Bates St., busses boarded at Woodward Ave and Fort St, fare 10¢ or 4-for-25¢ tickets; 25¢ for car and driver, 5¢ additional for each passenger over 12 years of age, Ambassador Bridge, Porter and Twenty-second Sts, 50¢ for car and driver, 5¢ additional for each passenger over 12 years of age; Walkerville and Detroit Ferry Co, foot of Joseph Campau Ave., 25¢ for car, driver, and 1 passenger; 5¢ additional for each passenger over 12 years of age.

Piers: Ashley and Dustin, foot of First St.; Detroit-Cleveland Navigation Co., foot of Third Ave.; Great Lakes Transit Corp., foot of Clark St.; Northern Navigation Co, foot of Brust St, White Star Navigation Co, foot of Griswold St; Chicago, Duluth & Georgian Bay Transit Co., foot of Woodward Ave.; Walkerville and Detroit Ferry Co, foot of Joseph Campau Ave.

Day Trips by Water: Steamers for Put-In-Bay and Cedar Point, First St pier, operate Wed, Thurs, Fri, Sat and Sun from June to Sept; steamers to Bob-lo (Bois Blanc) Island Park, Woodward Ave. pier, operate daily from June to Sept., speedboat rides, in summer, foot of Belle Isle Bridge, Detroit side, 50¢-\$1.

Traffic Regulations: Turns may be made in either direction at intersections of all streets except where traffic officers, traffic lights, or signs direct otherwise. Right-hand turns may not be made against red light. Watch street signs for parking limitations and one-way streets. Vehicle to right has right-of-way at unmarked intersections. Speed limit is 25 m p h, except where otherwise restricted by ordinance and signs are posted to that effect. This is merely a *prima facie* limit, however, and a speed below this, if conditions warrant it, may constitute a traffic violation, while higher speeds may be permitted in some cases.

Street Order and Numbering: E and W dividing line is Woodward Ave. to McNichols Road, N. of which John R St. is the E and W. dividing line. N. and S. base line starts at foot of Woodward Ave., at Essex Ave on the E. side, and at the Pennsylvania R.R. on the W side. No matter where a street starts, it will carry the same numbers as parallel streets. Grand Blvd. numbers from the Detroit River (E. and W. termini) to Woodward Ave. Outer Drive numbers E. and W. of Conant.

Parks: Belle Isle Park, bridge approach at E. Jefferson Ave and E. Grand Blvd; Chandler Park, Conner Ave, between Harper and Frankfort Aves, Palmer Park, Woodward Ave. and Merrill Plaisance, River Rouge Park, W. Warren Ave or Plymouth Road at Outer Drive, Water Works Park, E. Jefferson Ave. at Cadillac Blvd; Clark Park, Lafayette Blvd. at Clark Ave.; Cass Park, Second Blvd. at Temple Ave.

Shopping Districts: Detroit's main shopping district is concentrated within a mile circle of the City Hall. Principal department stores are on Woodward Ave., or within a block of it. Washington Blvd, Farmer, Adams, Library, and Griswold Sts. have specialty shops. Main arteries leading to and from the city are given to business practically throughout their length (Woodward, Jefferson, Grand River, Michigan, and Gratiot Aves).

Sight-Seeing Tours: Van Dyke Sight-Seeing Tours, main office and starting point, Hotel Statler; Chambers Sight-Seeing of Detroit, main office, 468 Drexel Ave., starting points. Woodward Ave. at Grand Circus Park, the Barlum, Book-Cadillac, Briggs, Detroit-Leland, Detroit, Fort Wayne, Fort Shelby, Madison-Lenox, Norton, Tuller, and Wolverine Hotels, Union Depot, and Michigan Central Depot; the Gray Line (Dept. of St. Rys.) Sight-Seeing Tours, main office, Room 108, Detroit City Hall.

Accommodations: 200 hotels; tourist lodges; auto camps; rooming houses; house-keeping rooms; apartments.

Information Service: Tourist Information Service, Campus Martius, opposite City Hall, maintained by Detroit Convention & Tourist Bureau; Detroit News Branch office, Majestic Bldg., Woodward and Michigan Aves., road and map information; Detroit Automobile Club, 139 Bagley Ave., near Hotel Statler, general tourist information.

Radio Stations: WWJ (920 kc.); WJR (750 kc.); WXYZ (1240 kc.); CKLW (1030 kc.); WJBK (1500 kc.); WMBC (1420 kc.); W8XWJ (42,060 kc.).

Theaters and Motion Picture Houses: Cass Theater, 300 W. Lafayette Blvd.; Wilson Theater, 350 Madison Ave., Contemporary Theater, Temple and Brooklyn Aves.; Littman's Peoples Theater, 8210 Twelfth St.; Cinema, 56 E. Columbia St., foreign-language pictures; Europa, 8525 Gratiot Ave., foreign-language pictures; Schubert-Lafayette Theater, W. Lafayette Blvd. and Shelby St.; Orchestra Hall, 3711 Woodward Ave.; and Masonic Temple, 500 Temple Ave., for stage productions, operas, concerts, and lectures. 7 first-run motion picture houses, 130 neighborhood houses; and 8 burlesque theaters.

Swimming: Rouge Park pools, Plymouth Road, at River Rouge Park, 12 miles from City Hall, adm. 15¢ incl. soap, towel, locker and suit, open 9 A.M. to midnight, between Decoration Day and Labor Day, Belle Isle Beach, on Belle Isle, 4 miles from City Hall, adm. 15¢ incl. shower, soap, towel, locker, and suit, public indoor pools: St. Clair pool, 4535 Fairview Ave., Kronk pool, 5555 McGraw Ave., Elmwood pool, 3211 E. Larned St., Central Recreation Center pool, 637 Brewster St.; Jefferson Beach Amusement Park, swimming and speedboat rides, on Lake St. Clair at E. Jefferson Ave. and Nine Mile Road, 9½ miles from City Hall, bus from Grand Circus Park, 25¢ fare, 25¢ and 35¢ adm. incl. suit, towel, and storage; Eastwood Amusement Park, outdoor pool, Gratiot Ave. and Eight Mile Road, 40¢ adm. incl. suit, towel, storage.

Golf: River Rouge municipal course, Plymouth and Burt Roads, 18 holes, greens fees, 50¢, all day 75¢; Belle Isle municipal course, NE. end of Belle Isle, 9 holes, greens fee, 25¢; Chandler Park municipal course, Dickerson Ave. and Chandler Park Drive, 18 holes, greens fee, 25¢ for 9 holes; Rackham municipal course, Woodward Ave. and Ten Mile Road, 18 holes, greens fees, 50¢, all day 75¢; Palmer Park course, Woodward Ave. and Seven Mile Road, 27 holes, greens fee, 25¢ for 9 holes; Hawthorne Valley Golf Club, W. Warren and Middle Belt Roads, four 18-hole courses, greens fees, \$1 for 18 holes, \$1.25 all day, weekdays; \$1.25 and \$1.50, Sat., Sun., and holidays; Sunnybrook Golf Club (1 mile W. of Van Dyke on Seventeen Mile Road), same rates. Highland Park Golf Club, Oakland and Davison Aves., two 9-hole courses, greens fee, 35¢ for 9 holes. There are numerous private and semiprivate courses.

Tennis Courts: Municipal tennis courts at Coplin and Averhill Aves., Belle Isle, Concord and Mack Aves., Warren and Connor Aves., Van Dyke and Georgia Aves., E. Forest and Iroquois Aves., Field and Ferry Aves., 4535 Fairview Ave., Conant and Davison Aves., Woodmere and Lawndale Aves., Lafayette Blvd. and Clark St., Maybury and Warren Aves., McGraw and Junction Aves., Ohio and Fullerton Aves., Vermont Ave. and Pine St., Grand River Ave. and W. Grand Blvd., Woodward Ave. at Palmer Park, River Rouge Park, W. Grand Blvd. at Detroit River, and Fairfield and Grove Aves.

Baseball: Briggs Stadium, Trumbull and Michigan Aves., home of Detroit Tigers, American League games, admission \$1.65, \$1.40, \$1.10, 85¢, 55¢.

Football: Professional gridirons U. of D. Stadium; and Briggs Stadium, American League games, home of Detroit Lions, admission \$2.20, \$1.10, 55¢.

Hockey: Olympia Arena, Grand River and McGraw Aves., National League games, home of Detroit Red Wings, admission \$2.20, \$1.65, \$1.10, 75¢.

Horse Racing: Spring meeting, at State Fair Grounds Track, n.f.d., admission \$1.25, including reserved seat; \$2.25 clubhouse.

Annual Events: Detroit Sportsmen's Show and Detroit Food Show, held in conjunction with Detroit and Michigan Exposition, Jan. (not held in 1940); Shrine Circus, Feb.; Builders' Show, Feb.; Flower Show, Convention Hall, March; Michigan Tool Show, March; Easter Lily Show, Belle Isle, Sunday before Easter; Dog

Show, May; Memorial Day Parade, May 30; Police Field Day, Belle Isle, July; Michigan State Fair, Fair Grounds, first week in Sept.; Firemen's Field Day, Briggs Stadium, Sept.; Rodeo, Olympia, Oct.; Chrysanthemum Show, Belle Isle, Oct.; Automobile Show, Convention Hall, late autumn, n.f.d.; Christmas Concert, Wayne University Music Department, 2nd week in Dec.; Christmas Flower Show, Belle Isle Conservatory, holiday season; Michigan Artists Show, Detroit Institute of Arts, Nov.-Dec.

DETROIT (598 alt., 1,568,662 pop.), not so long ago, was a quiet, tree-shaded city, unobtrusively going about its business of brewing beer and making carriages and stoves. Bulky Georgian mansions frowned over iron fences on Woodward and Jefferson Avenues, and the surveying of Grand Boulevard, 'way out in the country like that,' caused considerable headshaking. Detroit was first among American cities in the number of residences owned by occupants; Detroiters took modest pride in calling theirs 'the most beautiful city in America.'

And then, as Charles Merz said, came Ford. Not only Ford, but Buick, Durant, R. E. Olds, the Fisher brothers, and numerous others whose names survive in present and past motorcars. The automobile, which was to change all America, wrought its first profound changes in Detroit. The city grew at an unprecedented pace, its pulse beat quickening to the staccato rhythm of the riveters, as steel swung into place and grimly functional factories reared up almost overnight. Here was a new America: a new frontier coming into existence long after the physical frontier had been conquered. Detroit grew as mining towns grow—fast, impulsive, and indifferent to the superficial niceties of life. Niceties could wait. Meanwhile, there were automobiles to be made for the world.

Detroit rolled up its sleeves and went to work. The old Georgian mansions were converted into rooming houses. Trees were chopped down, so that the streets could be widened. The title of 'most beautiful city' became hollow. But who cared? Go-getters thought up snappier slogans: 'Dynamic Detroit'; 'In Detroit Life Is Worth Living'; 'Watch Detroit Grow; Better Still, Grow with It!' And Detroit grew. It absorbed suburbs and, when it could not absorb them, grew around them. Young fellows flocked in from the farms of Michigan, Tennessee, Georgia, Poland, Italy, Hungary—from all over the old and the new world. Detroit became fourteenth, tenth, seventh, fifth, fourth city of the United States!

Detroit had a special need for young men. The high-speed machines, in which auto parts were cut and shaped, and the throbbing conveyor belts, on which the finished cars were assembled, needed the suppleness of youthful fingers, the nervous alertness of youthful brains, and the stamina of youthful bodies. Detroit needed young men and the young men came: more Poles than the European city of Poznan, more Ukrainians than in the third city of the Ukraine, 75,000 Jews, 120,000 Negroes, 126,000 Germans, more Bulgarians, Yugoslavians, and Maltese than anywhere else in the United States, and substantial numbers of Italians, Greeks, Russians, Hungarians, Syrians, English, Scotch,

Irish, Chinese, and Mexicans—not to mention multitudes of native white Americans and Canadians.

But Detroit for all this, because of all this, is still in the formative stage of its development. There is nothing final about it, nothing fixed. To be sure, it has congeries of mills and factories, a stark, jagged skyline, overwhelming bulk (144 square miles), and all the other externals of the metropolis, but it lacks something of the bloom and glitter of such cities as New York or Chicago. 'Doing the night spots' consists mainly of making the rounds of beer gardens, burlesque shows, and all-night movie houses. Only one legitimate theater manages to survive the arduous Detroit winter; its fare consists of one-week stands by touring road companies. The world of fashion is not of prime importance. The sight of an occasional silk hat on Washington Boulevard, the city's nearest approach to a Fifth Avenue, strikes the average Detroiter as incongruous.

A visitor may spend weeks in Detroit without receiving the impression that he is in a city of more than 1,500,000 inhabitants. The streets bear a heavy load of traffic, but there is no subway, no elevated, or any visible proof that they would pay their way if constructed. There are crowds of pedestrians downtown, as in any big city, but these crowds soon thin out. Where, then, are all the people? A vantage point near one of the large factories at the end of a working shift will provide the answer. Here is the most exciting spectacle in all Detroit. The exodus of the crowd from a big football game is as nothing compared with it. Shrieking whistles signal the end of the work period, and the factory disgorges a veritable flood that fills the streets almost from curb to curb. It is a flood, not of men solely, but of automobiles, and on the steering wheel of each are the calloused hands of a workingman.

Here are the people of Detroit. Here, also, is indisputable evidence that Detroit is, indeed, the motor city.

Three-fifths of the world's automobiles are made in Michigan, and the bulk of these are 'f.o.b. Detroit.' This centralization (nearly all passenger-car manufacturers have their plants within 250 miles of Detroit) is the more striking in view of the supremely national character of the industry. It consumes, for example, four-fifths of American rubber imports, three-fifths of the plate glass, three-fifths of the upholstery leather, one-fifth of the tin, one-fifth of the lead, one-seventh of the finished rolled steel, one-eighth of the copper, and three-tenths of the nickel used in the United States, not to mention enormous quantities of textiles, paints, and petroleum products. Automobile manufacturing contributes more to the prosperity and living standard of the Nation than perhaps any other industry. Some economists, indeed, consider it the principal cause of American prosperity.

Detroit, on the other hand, was a city of respectable size (285,000 in 1900) before the automobile appeared. It is still boastful of its diversified industry, ranging all the way from seeds to steel. Nevertheless, it is doubtful whether any other city and commodity in the world

are more completely identified with one another than Detroit and the automobile.

Detroit workers do not simply make automobiles—they drive them. Their annual wage is not much higher than that of industrial workers generally, but they drive them just the same. To the average Detroiter, owning a car is more important than having a telephone or owning a radio. Owing to the lack of an adequate transportation system, the automobile is essential to the Detroiter. If he cannot buy a new one, then he must have a secondhand one. The ratio between Detroit's populace and registered automobiles is one automobile to 5.07 persons. This is the highest registration of any city in the country, save Washington, D. C. (If taxi-cabs, which are common carriers, were excluded, Detroit would probably take the lead.) The significant fact is, however, that most of Detroit's automobiles are owned by working people. They use their cars for drives in the country, for trips to the old home town in slack seasons, and particularly for travel to and from work. The peculiar layout of Detroit streets, as well as its area, makes the latter almost a necessity.

The map of Detroit is one of frustrated good intentions. While still very young, the city resolved to adopt the lines of the L'Enfant plan for Washington, with streets like spider webs in a series of spokes and hubs. But somehow the plan went awry. Half of the northernmost circle was obliterated, and a gridiron street pattern was superimposed over the radial one. The result is confusion, especially in the center of the city; there, even the oldest inhabitant relies upon instinct as his surest guide.

The principal thoroughfares are Fort Street, Michigan, Grand River, Woodward, Gratiot, and Jefferson Avenues. Each of these forms the axis of a sharply defined neighborhood, so unlike the others that it all but constitutes a separate community. Grand Boulevard traverses almost every midtown section of the city. Beginning at the Detroit River, three miles west of Woodward Avenue, it swings in a wide loop through the city and returns to the river about three miles east of Woodward. A ride along its length affords the visitor a comprehensive view of Detroit, varying from residential areas of neat houses fronting upon well-kept lawns to the Packard Plant and the impressive Fisher and General Motors Buildings.

Old prints show Detroit stretched along the Detroit River, as though that stream were the village common. Its surface was lively with craft of all descriptions, and residents thronged the shore, fishing, throwing pebbles, or just looking. Throughout the greater part of the nineteenth century the river (which, because it formed a strait between Lakes Erie and St. Clair, gave Detroit its name, *détroit* being French for 'the strait') was an essential part of community life. Today that is changed. The river still carries many craft—sailboats, outboards, pennant yachts, and large freighters plying between Duluth and Lake Erie ports—but Detroit has turned its back on it. The stream now flows, almost unobservable from the city, past a rampart of warehouses, elevators,

and other buildings. The waterfront shops and residences have been moved uptown. Belle Isle, a beautiful park, remains almost the last reminder of the day when Detroiters looked to the river, not alone for industry and commerce, but for pleasure and relaxation.

Detroit has grown away from the river in haphazard fashion, with factories and square frame houses on the lower west side, more factories and assorted houses on the northeast, and blocks of apartments, two-family flats, and modified English Tudor houses in brick veneer on the northwest. Detroit encloses two other separately incorporated cities: Highland Park, Ford's earlier domain, and Hamtramck, a city with French-named streets and Polish residents. It has, besides, other areas that qualify as separate cities in every respect except government, notably Paradise Valley, the Negro section east of Woodward Avenue; Twelfth Street, the Jewish main street; and Dexter Boulevard, the Jewish counterpart of Fifth Avenue.

Detroit has little of the quaint, the bizarre, the picturesque. A few places and events might qualify, such as the Gypsy restaurants in Delray to the south, the Eastern Market (one of the few places in the city where horses are seen after daybreak), and the carnival on Paradise Valley's Hastings Street after a Joe Louis victory. In its identification with the automotive industry, however, Detroit has many uncommon aspects: the staring rows of ghostly blue factory windows at night; the tired faces of auto workers lighted up by simultaneous flares of match light at the end of the evening shift; and the long, double-decker trucks carrying auto bodies and chassis.

Detroiters work hard. The bulk of them have little time for culture, for the theater, the night club, or the erudite lecture. They find their recreation in going on Sunday drives with the family or cheering for their favorites at the baseball park. The Detroit Tigers enjoy the most loyal following of any baseball team in the major leagues—whether they win or lose. Detroiters are passionately interested in them. One of the city's six radio stations broadcasts play-by-play descriptions of all Tiger games, both at home and away. The three daily newspapers carry column after column of baseball news, not simply in the sport sections, but in front page streamer headlines when a momentous event occurs, such as Hank Greenberg's spraining his wrist.

Detroit may be too preoccupied with work-a-day matters to devote much thought to cultural pursuits, but, none the less, its Institute of Arts and its library—financed by public funds—are splendidly housed and well patronized. Because of swift, undirected growth, Detroit may have forlorn aspects, but this does not indicate a lack of civic pride. Detroit, for all its shortcomings, is a progressive city. An active and intelligent electorate has kept it comparatively free of machine politics and the accompanying corruption. The city government is nonpartisan, with members of the common council elected at large, rather than by separate wards and precincts. The municipality owns the street railway and bus system, as well as Wayne University, the fastest-growing institution of higher learning in the United States. The per-capita cost of

education in its schools, \$97.87, is greater than similar costs in Chicago or Baltimore.

About two-thirds of the people of Detroit are church members: 550,000 belong to the Roman Catholic Church and 426,000 to the several Protestant denominations affiliated with the Detroit Council of Churches.

It is not at all unusual for extreme statements to be made about Detroit as a center of radical thought, or for the city to appear at times to justify them. Witnesses before a Congressional committee in 1938 declared that Detroit was a hotbed of communism. In Mayor Pingree's time, near the end of the nineteenth century, conservative elements throughout the country feared that Detroit was experimenting with socialism, all because the unemployed were given free use of land to raise garden produce for their subsistence.

Still earlier, during the American Revolution, the very name of Detroit was enough to send a shudder through every American patriot. That was when the settlement's British governor, Henry Hamilton, was known as 'the Hair Buyer of Detroit.' Under his direction, whole armies of Indians, armed with red-handled scalping knives, were dispatched against frontier homes and communities. Among the State papers of Virginia, *In Council*, June 18, 1779, is the following: 'It appears that Governor Hamilton gave standing rewards for scalps, but offered none for prisoners, which induced the Indians, after making their captives carry their baggage into the neighborhood of the fort, there to put them to death and carry in their scalps to the Governor, who welcomed their return and success by a discharge of cannon.'

Hamilton's methods of warfare gave Detroit a bad name that required many years to live down. Several American campaigns were organized against the fort. 'I have ever been of the opinion,' wrote General George Washington to Governor Thomas Jefferson of Virginia, 'that the reduction of the post of Detroit would be the only certain means of giving peace and security to the whole western frontier, and I have constantly kept my eye upon that object.'

When the Revolution began, Detroit was 75 years old, having been founded July 24, 1701, by Antoine de la Mothe Cadillac, who was in the service of Louis XIV of France. The early history of the trading post, of its acquisition by Great Britain at the close of the French and Indian War and its dramatic defense against the Ottawa chief, Pontiac, is told elsewhere, as part of the history of Michigan (*see History*). Until its occupation by Americans, Detroit remained little more than an outpost, dependent upon supply lines to the East for means of subsistence. It was an important fur depot in the West, and of great military value because of its control of Great Lakes commerce.

The British continued to hold Detroit after the Revolutionary War, despite a provision to the contrary in the Peace of Paris (1783). Although hostilities had officially ceased, Indian raiding parties were armed at the fort and dispatched against American pioneers. It was plain that Detroit, in British hands, would forever prevent settlement

of the Northwest and might prove an insuperable barrier to any westward migration whatever. Hence, desperate efforts were made to obtain British compliance with the peace treaty, but to no avail. The Canadian Constitutional Act of 1791 formally assumed jurisdiction of Detroit, and Detroit representatives were sent to the Upper Canadian Legislature. As late as June 1794, John Jay, special minister to London, reported that he had positive information that Detroit 'will not be surrendered.' As a last resort, Major General Anthony Wayne was sent against the Indians, whom he defeated decisively at the Battle of Fallen Timbers in August 1794. At a subsequent treaty negotiated in England by John Jay, the British finally relinquished all claims to these northwestern lands, and on July 11, 1796, Captain Moses Porter, in command of Wayne's advance guard, raised the Stars and Stripes over Detroit.

At that time there were about 300 dwellings in the village—some clustered around the fort, the remainder on long, narrow farms up and down the river—all in ramshackle condition, owing to almost 20 years of continued warfare. Most of the farms were sorry affairs, the French agricultural implements and methods being little better than those of the Indians. But the citizens of Detroit quickly warmed to American ideals of democracy and self-government. When in August 1796 they elected to name their newly organized county after General Anthony Wayne, in recognition of his services, the latter noted this fact in his letter addressed to the inhabitants of Detroit.

'I have received with much pleasure your polite address of this date,' he wrote, 'which not only demands my grateful acknowledgment for the flattering testimonies it contains of your esteem, but affords me an opportunity to remark with what pleasure I have observed the general satisfaction which has appeared to prevail among the citizens of Detroit and its neighborhood upon the establishment of the government of the United States, and the alacrity and laudable desire they have evinced to promote the due execution thereof.'

These were in no sense a conquered people. One of the factors, indeed, that induced Great Britain to relinquish Detroit was a well-grounded fear that the people might revolt. In 1802, Detroiters held perhaps the first town meeting in the West. In the same year, they petitioned and obtained local self-government and, on May 3, 1802, elected town officers in their first election under United States rule. Women as well as men were permitted to vote in this election.

Detroiters did not long enjoy their franchise. In 1805, they were beset by two misfortunes: the town was razed by fire, and a governor and three judges, in accordance with provisions of the Ordinance of 1787, assumed control of Michigan Territory. There was some consolation to be derived from the fire in the reflection that most of the houses destroyed were scarcely habitable, and complete rebuilding of the village could be undertaken according to plan. This was done, but much against the inhabitants' wishes, for the plan was ordained by the governor and judges, who had alienated the people by arrogating to

themselves the judicial, legislative, and executive powers of government—a course the Ordinance empowered them to follow, but one which its framers had obviously not contemplated in localities where popularly elected bodies already existed.

Almost the first act of the governor and judges was the revocation of the charter granted in 1802 and the incorporation of Detroit as a city, with upper and lower houses chosen by the people and a mayor appointed by the governor and judges. The exact function of the people's representatives in this government was frankly stated in the corporation law: 'And be it further enacted, that every Bill, or Act, having passed by a majority of both chambers, before it becomes a law shall be presented to the mayor, and if not approved by him shall not take effect, or become a law, but shall be returned, with his objections, to the chamber in which it last passed—there to remain in status quo until the day of judgment, without further reconsideration.'

The citizens refused to participate in any further elections under this law, which, accordingly, was repealed in 1809. Henceforth, the governor and judges ruled openly. They, the four of them, introduced the laws, adopted them, enforced them, and sitting as judges, interpreted them. They also operated as a Land Board, selling and giving away city lots, but rendering no account of the proceeds. They consumed so much time in 'measuring and unmeasuring' the streets and performing other duties incidental to the new city plan that, for more than a year after the fire, not a single house was built, and, two years thereafter, only 19 lots had been distributed. The residents were convinced that the aim of the governor and judges was to drive them away from Detroit.

However that may be—and several modern historians point to extenuating circumstances—soon after the outbreak of the War of 1812, Governor Hull surrendered Detroit to an inferior British force without firing a single shot. For this deed, he was subsequently court-martialed and condemned to death, but escaped execution through presidential pardon (*see History*).

After the surrender Judge Woodward, a member of the quartet that had governed the settlement, retained his office. In contrast, Father Gabriel Richard, Catholic priest and spiritual leader of the Canadian-French community, was jailed and exiled to Canada for his declared opposition to the new regime. Father Richard, incidentally, was the first priest to serve in Congress, by virtue of his election as territorial delegate in 1823 (*see Social Institutions*).

Woodward clung to his position after Detroit was regained by the United States and, in fact, remained in office until 1824. Letters to Eastern papers often assailed him, and the *Detroit Gazette* (established 1817, the first regularly published paper in the territory) denounced him so effectively that the *New York Commercial Advertiser* asserted, 'Michigan is the worst governed State or Territory in the Union if half is true that has been published in the last three or four years and never contradicted.' It should be stated, however, that Governor Cass

was the fiercest opponent of this condition; the *Gazette* was sponsored by him. In 1815, he obtained the restoration of local government to Detroit and fought persistently thereafter to extend democracy throughout the territory.

Detroit grew slowly. In the 20 years following American occupation, less than 400 were added to its population. One cause of the town's backwardness lay in its distance from the Ohio River, then the main-stream of immigration. Another, and perhaps the most serious deterrent to settlement of Detroit and Michigan, was the widely circulated report of Edward Tiffin, surveyor-general in the United States Land Office, who declared that in the whole territory there was 'not one acre in a hundred, if there should be in a thousand, that would in any case admit of cultivation. It is all swampy and sandy.' This report, made in November 1815, was followed a week later by another, stating, 'Subsequent accounts confirm the statements, and make the country out worse, if possible, than I had represented it to be.'

Emigrants who read this report were disinclined to go out of their way to Detroit, when there was apparently much better land to be found elsewhere. The frontier moved westward, and Detroit, far to the east, remained in all respects a frontier city. Trade was conducted by barter, and the beaver skin—then, and for many years to come, the chief resource of the settlement—was the unit of value. Flour, beef, corn, pork, and other staples, which many settlements further west were producing, had to be imported to Detroit from the East. 'As prices are in our market,' the *Gazette* noted on January 22, 1820, 'a New England farmer of common industry and enterprise could purchase one or two good farms with the avails of his barnyard and vegetable patch for one year.'

The first public stage did not leave Detroit until 1822. Its departure coincided with the arrival of the *Superior*, second steamboat put in operation on the Great Lakes. Almost the only means of conveyance within the town and environs were low two-wheeled carts that the French had been using since Cadillac's time. These were rendered useless in spring and autumn by the mud that made the streets nearly impassable even to pedestrians. Mail was supposed to arrive once a week after 1818, but it was often delayed, and for ten years there was little improvement in the service.

Not until after completion of the Erie Canal does there seem to have been any considerable increase in population—though census figures are conflicting—and the canal was ten years old before the tide of immigration approached anything like a flood. By that time, accurate surveys of Michigan lands had been sufficiently well-circulated to dispel the misconceptions of the Tiffin report.

By 1837, the year of statehood, Detroit was a city of nearly 10,000. Farm land on the outskirts brought more than ten times the price paid for it in 1835; the value of city lots was tripled. Stages ran to all principal points in the interior, including Chicago and Flint, and to Buffalo in the East; ferries, one operated by horse power, another by steam,

plied regularly to and from the Canadian shore. Charters had been granted for railroads, and two that ran to Ypsilanti and Pontiac were approaching completion.

Detroit laborers were beginning to organize, the first such action in the West (*see State Development*). Factories and breweries were being built. There were three daily newspapers in the city, a monthly and five weeklies, a library of 4,100 volumes, a public lyceum, and several private and religious schools, including a ladies' seminary. In such surroundings the plea of 'frontier conditions' could no longer excuse the lack of an adequate public-school system. Public meetings were called repeatedly to urge the establishment of common schools, until finally, in 1838, the first public schools were opened, and 507 of the 2,097 white children between the ages of 5 and 17 were accommodated. This was followed by demands for free public schools supported by taxes. A town meeting in 1842 went on record in favor of 'intelligence for the poor equally with the rich.' In May of that year, the first free schools under the Detroit Board of Education were opened.

In 1838, a 12-mile stretch of the Detroit & Pontiac Railroad was put in operation. It was extended two months later to Royal Oak, and in the following year to Birmingham. A locomotive was then used for the first time, the trains having previously been pulled by horses. In 1843, the line was extended to Pontiac, and there, in 1858, it joined with another line to give through service from Detroit to Milwaukee. Detroit and New York were joined by rail (through Canada) in 1854, Detroit and Toledo in 1856, Detroit and Port Huron in 1859, and Detroit and Lansing in 1871. Two years later, the last regular stage coach out of the city ceased to run.

Detroit was an important terminal on the Underground Railroad and the center of considerable antislavery agitation. As early as 1833, there had been a riot to prevent the arrest of fugitive slaves, and in 1837 the Detroit Anti-Slavery Society was organized. John Brown brought 14 slaves to Detroit from Missouri in 1859. It was at Detroit, in consultation with Frederick Douglass, the 'black Lincoln,' that the raid on Harpers Ferry is said to have been planned. Despite the clear dominance of abolitionist sentiment, the city was not without Southern sympathizers. Indeed, there was sufficient proslavery opinion to precipitate a serious anti-Negro riot in 1863. Later that year, 895 Detroit Negroes joined the Union army.

Some of the city's foremost industrial enterprises had their beginnings in the year before the Civil War, notably the smelting of copper and iron and the manufacture of tobacco and varnish, but the greatest industrial development occurred after 1863. In the succeeding decade, Detroit's principal nineteenth-century industries were established: the manufacturing of railway cars, furniture, stoves, shoes, steel, pharmaceuticals, carriages, and bicycles. The last two supplied a foundation for the subsequent development of the automobile industry.

The population rose steadily throughout the nineteenth century, doubling every decade between 1830 and 1860. The first immigrants

were principally from New York and New England. The earliest foreign born to settle in the city were Germans—some arriving while Michigan was still a Territory—and they were followed by Irish and Poles.

By 1880, the various neighborhoods of the city were fairly well defined, with Corktown on the lowest west side, Dutchtown on the east, and Kentucky, or the Negro quarter, below Dutchtown. The Poles lived east of Dutchtown. The section west of Woodward and north of Grand River was called Piety Hill, because of the rich people who lived there. The 'tough' part of town, near Atwater and Franklin Streets, was known as the Potomac, because it belied the phrase, 'all quiet on the Potomac tonight.'

Detroit's later history—excepting the story of the automobile, which is told elsewhere (*see State Development*)—is more or less interwoven with the careers of three of its mayors: Hazen S. Pingree, who served from 1890 to 1901; James Couzens, 1919 to 1923; and Frank Murphy, 1930 to 1933. The first two were Republicans, the last a Democrat, but their policies and ideals were fundamentally the same.

Pingree, elected as a reform mayor, gave his constituents more reforms than they had expected. Not satisfied with a surface clean-up of municipal corruption, he undertook to correct an unfair system, carried on at the expense of the average citizen, and engaged in a ten-year battle with the gas, electric, and street-railway monopolies. He succeeded in reducing the gas rate and in placing street lighting under municipal control. His 'potato patches' for the unemployed were probably one of the first public ventures in work relief. Not until the dark days of 1930, when Mayor Murphy began spending \$1,000,000 a month for public welfare, did Detroit again enjoy such renown in the field of social welfare as Mayor Pingree's garden plots earned for it in 1894.

When James Couzens assumed office, 18 years after Pingree's retirement, Detroit was an entirely different city. And Couzens himself had played no small part in effecting the change. As Henry Ford's most active partner in the Ford Motor Company, he was a major figure in the development of the automotive industry and jointly responsible with Ford for the establishment of the \$5 minimum daily wages. His career as mayor was a vigorous one, for he carried on Pingree's fight with the public utilities, but it was preceded by an even stormier term as police commissioner. As a result of his drive against organized vice and its tie-up with the judiciary, he was jailed for contempt of court. His superior, Mayor Oscar B. Marx, told him he was 'the most unpopular man in Detroit.' So he ran for mayor, 'to find out for myself just how popular I was with the people.' He won.

In 1921, Mayor Couzens obtained city ownership of the street railway, thus victoriously ending a campaign that Mayor Pingree had started two decades earlier. In addition to his struggles with the gas, electric, telephone, and street-railway companies, Mayor Couzens also concerned himself, as Pingree had done, with the problem of unemployment. 'When you have a team of horses and no work for it, you feed

it and care for it just the same,' he said. 'Our workmen deserve just as good treatment as our horses.' He initiated public work relief ten years before the New Deal.

As Republican senator from Michigan, Couzens aligned himself with the Progressives. When, in 1931, President Hoover spoke in opposition to the use of Federal funds for unemployment relief, Senator Couzens replied: 'We spend hundreds of million of dollars on the army and navy in an attempt to guarantee security from outside attack. Why is it any less logical or sensible to spend the taxpayers' own money on our people, to maintain security within the country?'

In 1936, Senator Couzens openly announced his support of President Roosevelt's reelection and thereby failed to obtain his own renomination by the Republican Party. Before he could break a lifelong record of never having voted for a Democrat for President, he died, on October 22, 1936, of a chronic ailment.

Like Pingree, Mayor Murphy rode into office on a reform wave, or, more correctly, the reform of a reform wave. His predecessor, Mayor Charles Bowles, had been a reform candidate, but also the candidate of other, less reputable elements; and scarcely had he taken office than the very conditions he had been elected to abolish became more pronounced than ever. Gambling, especially, was wide open, and book-making establishments flourished throughout Detroit. A few months after Mayor Bowles's inauguration, a movement was begun to recall him. The success of that recall was a triumphant reaffirmation of Detroit's democratic heritage. In the run-off election that followed, Murphy was chosen, despite the bitter opposition of most of the local newspapers.

Murphy's term as governor of Michigan (1937-9) must have seemed to him a good deal like a third term as mayor of Detroit, since so much of his time and effort were spent on problems arising from strikes in Detroit and other automobile centers. In endeavoring to find a peaceful solution to these problems, at a time when tempers were unbridled and all the relevant facts were not available, he was inevitably assailed by the same people whose convictions and interests led them to view with alarm the crisis that had arisen.

In the early months of 1937, Detroit underwent significant social and economic changes. Previous to that time the city was known as the national center of the open shop. With the exception of the unions of skilled craftsmen, labor organizations were not tolerated (*see State Development*). This was chiefly true of the automotive industry, but it was by no means restricted to that industry. Besides being host to numbers of industrial operatives, as revealed in later investigations by the Senate Committee on Civil Liberties, Detroit was also national headquarters of the Black Legion, a subversive organization that abhorred trade unionism.

The unionization of automobile workers wrought a profound social effect in Detroit. Hitherto the population had been constantly shifting. Now that a system of seniority has been adopted, new employees may

not be hired after a layoff, until all those having seniority have been returned to work. Consequently Detroit auto workers have a feeling of greater security in their jobs and a heightened sense of responsible identity with the welfare and future of the city in which they live.

There is drama in Detroit: the drama of swift and unpredictable growth; the drama of change and never-ending readjustments to fluctuating social and economic conditions. There is hope in Detroit, for, with all its youth and the impatience born of youth, it is willing to make mistakes, to experiment on a tremendous scale both within and without its factories. It is not set in its ways. It has strength and it has power: the power of modern labor-saving machinery and the power of willing hands, eager to work and backed by the inventive genius, the technical skill, and the limitless resources of the Nation.

MID-CITY POINTS OF INTEREST

1. The DETROIT AND WINDSOR FLEETWAY TUNNEL (24-hour service; bus fare 10¢ each way or one 4-for-25¢ token; 25¢ car and driver, and 5¢ additional for each passenger over 12 years of age), 200 Bates St., is the first and, thus far, only vehicular tunnel ever built between two countries. A mile-long white-walled tube 80 feet below the surface of the Detroit River, it was built between 1928 and 1930 at a cost of \$22,000,000. The brilliantly lighted and air-conditioned tunnel can accommodate 1,000 vehicles an hour in each direction. No passports are required to pass through it. United States drivers, however, must present their automobile certificate of registration to customs officers in Canada. If the return is by the same route (these regulations also apply to the Ambassador Bridge and the Walkerville Ferry), the certificate is left with the official and picked up on the return trip. By permit, the return may be through another port, in which case the certificate is retained by the driver. Owing to the war (1940) new regulations concerning passports are in force. Tourists should make enquiries at Detroit before planning to cross the border.

Customs regulations provide for personal duty exemption of \$100 on purchases made in Canada by visitors who remain more than 48 hours. Cigars, cigarettes, tobacco, foodstuffs, and one wine-gallon of alcoholic beverages may be included in the \$100 exemption, but on these articles the internal revenue tax must be paid at the customs office. State taxes must be paid on all alcoholic beverages. Visitors to Canada must obtain a permit to remain more than 24 hours.

2. The MARINERS' CHURCH (entrance 20 W. Woodbridge St.; Sun. services 11 A.M. and 7 P.M.; open weekdays by permission), Woodward Ave. and Woodbridge St., a rubble limestone building in a plain version of the late English Gothic, is the second-oldest church structure in Detroit. In a waterfront neighborhood, the rugged walls, two-and-a-half feet thick, have stood unchanged since the first services were held on Christmas Eve in 1849. Julia Anderson and Charlotte Taylor, half-sisters, built the church for the crews of the many ships that then

laid up in the Detroit River for the winters, intending thereby to counteract the influence of near-by dives and grog shops. Since there was no provision for maintenance, the ground floor was rented, first to house the post office and later for the offices of wholesale produce dealers. All but the Woodward Avenue front of this floor, which has a small chapel at the rear and is now called Taylor Hall, is used nightly for accommodation of river-front down-and-outers, to whom food is served free.

3. The MARINERS' INSTITUTE (*open by permission*), 300 Griswold St., housed in a small building behind the Mariners' Church, provides a home for destitute and unemployed men. The property is a part of the original church plot, which extends from Griswold Street to Woodward Avenue. Under the terms of the will donating the site, a sailors' bethel and home were to be maintained here. Through the agency of the Detroit Episcopal City Mission, the Protestant Episcopal Church has carried out the intention of the donors, enlarging the scope of service as the character and needs of the city changed.

4. The WAYNE COUNTY BUILDING, at the E. end of Cadillac Square, occupies a block bounded by Randolph, Congress, E. Fort and Brush Sts. The structure, a good early example in Michigan of Italian Renaissance, was designed by John Scott and Company and built between 1895 and 1902. The tall ground and first stories are of rusticated granite; the three upper stories and the tower are of Ohio sandstone. Emphasis is given the main (Randolph Street) entrance by a high flight of steps and a Corinthian portico. The sculptured compositions of the pediment, in high relief and framed by the ornamental cornice, depict General 'Mad Anthony' Wayne conferring with the Indians. Above and flanking the portico are two spirited groups of bronze figures symbolic of Progress, the work of J. Massey Rhind, New York sculptor. The square tower, rising 280 feet from the ground level and enriched by a Corinthian colonnade, terminates in a small green and gold dome and lantern. At the four corners of the tower colonnade parapet are single bronze figures representing Law, Commerce, Agriculture, and Mechanics.

5. The DETROIT HISTORICAL MUSEUM (*open 1-5 Mon.-Fri., 9-5 Sat.*), Room 2302-18 of the Barlum Tower, Cadillac Square and Bates St., has on display nearly 4,000 items dealing with the historical development of Detroit and Michigan. The museum, opened in 1938, is operated by the Detroit Historical Society, an organization founded in 1922 by co-workers of the late Clarence M. Burton, donor of the Burton Historical Collection in the Detroit Public Library (*see Art Center*). Exhibits include devices for spinning, weaving, shoemaking, and lighting; Indian stone and flint implements, basketry, pottery, and beadwork; pioneer and colonial household effects; gowns, hats, and bonnets dating from 1820 to 1900. Of special interest are 440 pieces of fire-fighting equipment formerly used by the Detroit Fire Department; some of the apparatus was made in 1777.

6. CADILLAC SQUARE, extending two blocks E. of Woodward Ave. from the intersection with Michigan Ave., is the site of the old City Hall, built in 1835. Between 1835 and 1893, Cadillac Square contained the City Market, which had space in the main floor of the old City Hall and later in other buildings erected by the city. When the market was vacated in 1893, the portion of Cadillac Square that now composes CADILLAC SQUARE PARK was turned over to the Department of Parks and Boulevards; the remainder of the two-block square, utilized for traffic, is a part of the confused street system of downtown Detroit.

At the west end of the square, opposite the City Hall, is the SOLDIERS' AND SAILORS' MONUMENT, designed by Randolph Rogers as a memorial to the Northern forces in the Civil War. The granite shaft is ornamented with bronze figures and surmounted by a symbolic figure of Michigan, ten feet high, armed with shield and sword. East of the monument is CADILLAC'S CHAIR, unveiled in 1901 at the opening of the bicentenary exercises in tribute to the founder of Detroit. The vacant chair, of red sandstone, now chipped and dingy, was designed to symbolize the seigneurial rule of Cadillac. North of the Soldiers' and Sailors' Monument, at the intersection of Monroe and Woodward Aves., is CAMPUS MARTIUS, a triangular plaza surfaced in concrete. During Detroit's early days, it was in fact as well as name a 'field of war.' A blockhouse stood at its center, and military drill grounds occupied the rest of the area.

7. The GREATER PENOBSCOT BUILDING, Griswold and Fort Sts., Detroit's tallest skyscraper, is a 47-story limestone structure with a base of polished gray granite. It was designed by Smith, Hinchman, and Grylls of Detroit, and completed in 1928. The simple shaft of the building is broken above the thirtieth story by a series of setbacks. The entrance doors are trimmed with mahogany-colored polished granite carved in low relief; friezes and carvings adorn the walls and pillars of the lobby. The PENOBSCOT OBSERVATION TOWER (*open 9-5 daily during fair weather; adm. 25¢; telescope furnished*) affords an excellent view of the city. Rising 100 feet from the roof is a steel structure capped with an aviation beacon, laced with glowing neon tubes.

The ultra-short wave RADIO BROADCASTING STATION W8XWJ (*open 9 A.M.-11 P.M. weekdays*), on the 44th floor, is operated by the *Detroit News*. It is an experimental station used for educational programs.

8. The FEDERAL BUILDING, 250 W. Fort St., designed by Robert O. Derrick, Inc., covers the block bounded by Lafayette Ave., Fort, Wayne, and Shelby Sts. The first of the ten floors is occupied by the Post Office Department and the Home Owners' Loan Corporation; the remaining floors house other Federal departments and courts. The building is modern in design, employing simplified Classic details and, at the eighth-floor sill course, a slight setback to relieve its cubical form; the base is of black polished granite, the upper stories of buff limestone. The building, which cost \$3,896,000, was opened in 1934.

Art, Education, and Science



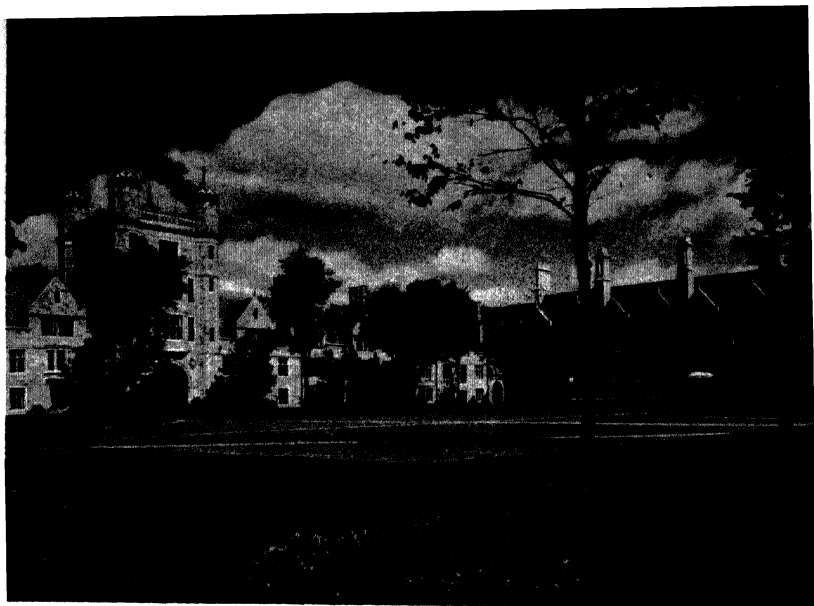
Photograph by courtesy of Cranbrook Academy of Art

ORPHEUS FOUNTAIN, CRANBROOK (Carl Milles, Sculptor)



Photograph by courtesy of University News Service

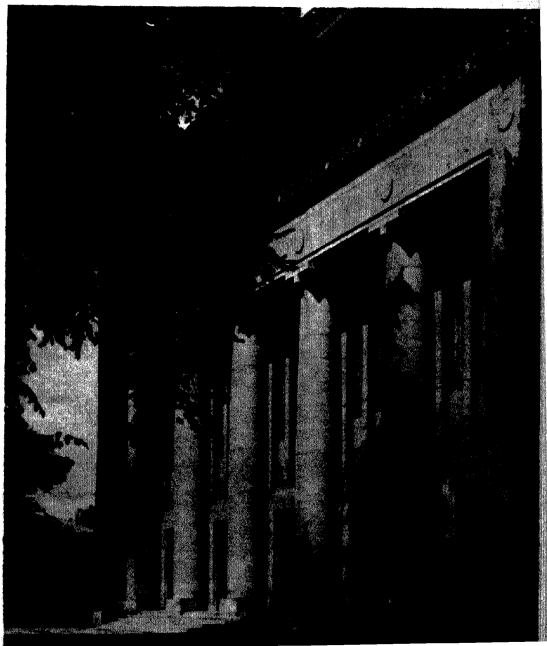
ANGELL HALL, UNIVERSITY OF MICHIGAN, ANN ARBOR



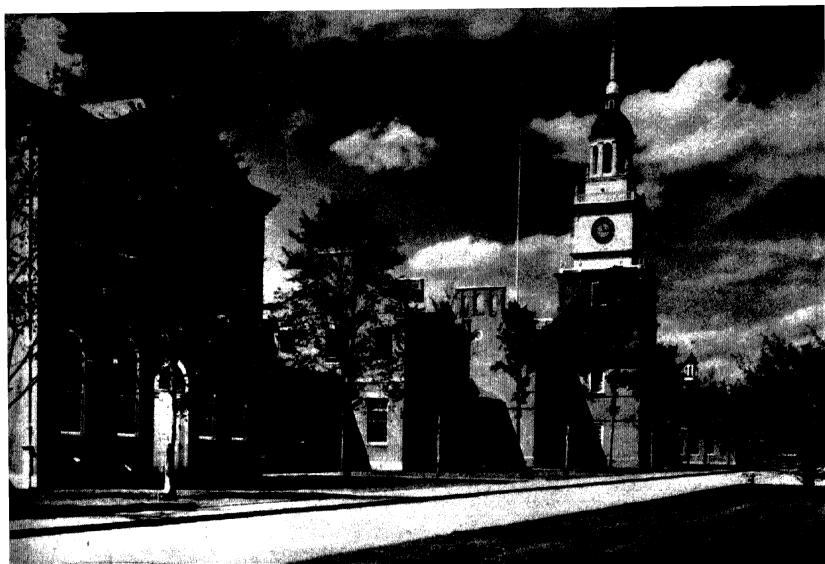
Photograph by courtesy of the University News Service

LAW CLUB AND MEN'S DORMITORY, ON THE LAW QUADRANGLE, UNIVERSITY OF MICHIGAN

Photograph by courtesy of University of Michigan



**HILL AUDITORIUM,
UNIVERSITY OF MICHIGAN**



EDISON INSTITUTE MUSEUM, DEARBORN

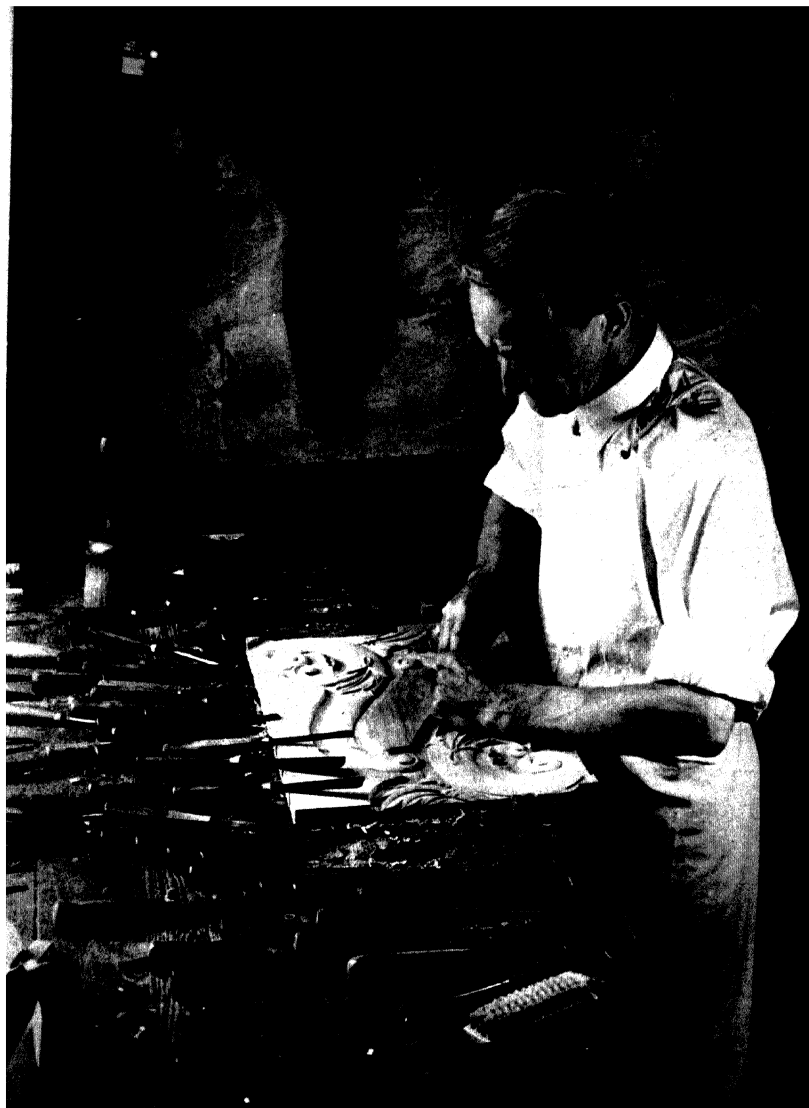
Photograph by courtesy of Ford Motor Company

THOMAS EDISON'S LABORATORY, DEARBORN

This is the laboratory in which the inventor carried on his experiments at Menlo Park.

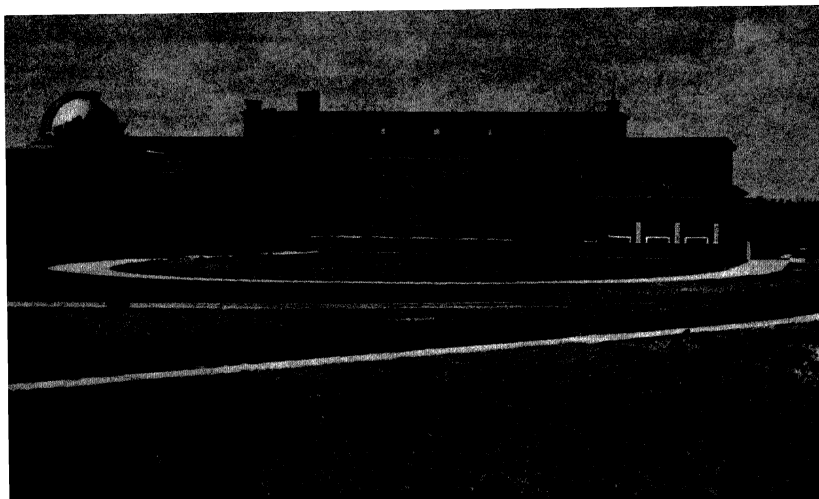
Photograph by courtesy of Ford Motor Company





Photograph by courtesy of Grand Rapids Chamber of Commerce

FURNITURE CRAFTSMAN AT WORK, GRAND RAPIDS



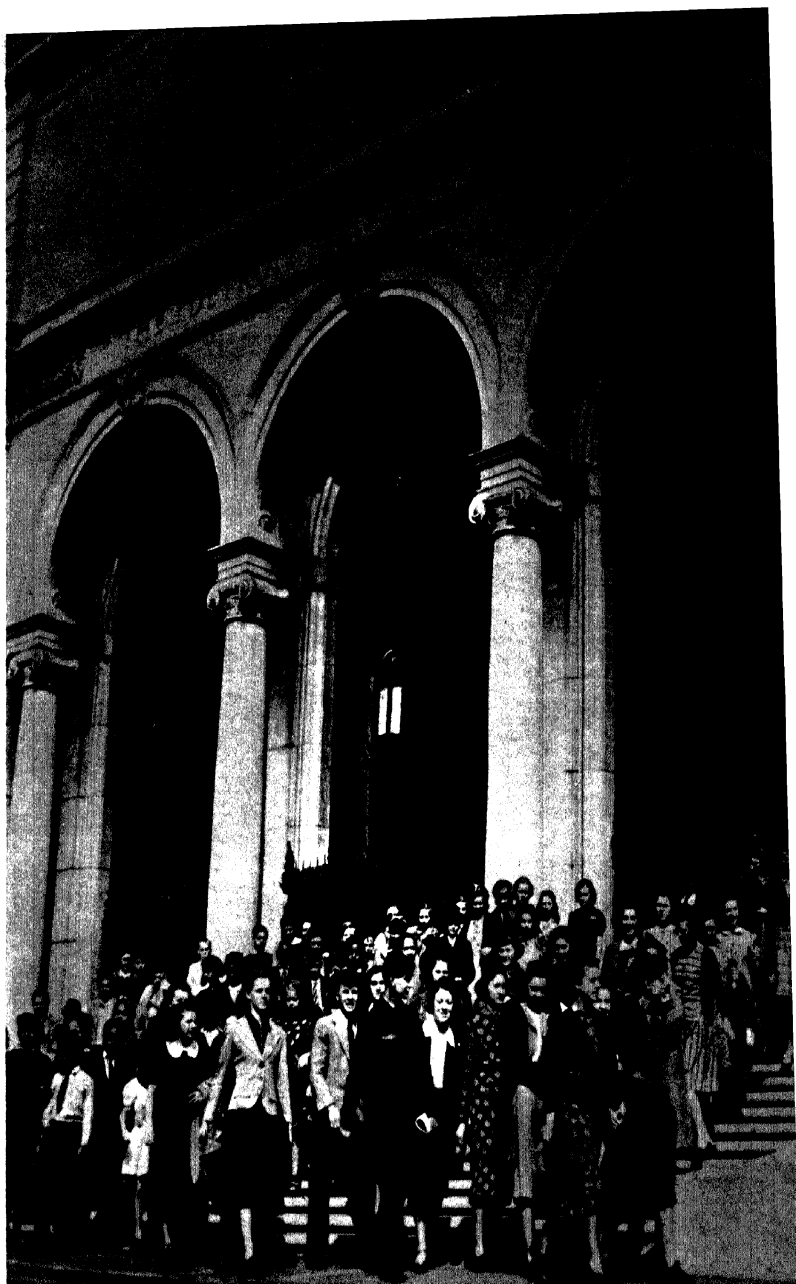
INSTITUTE OF SCIENCE, CRANBROOK

Photograph by courtesy of Cranbrook Academy of Art

BOYS' SCHOOL, CRANBROOK

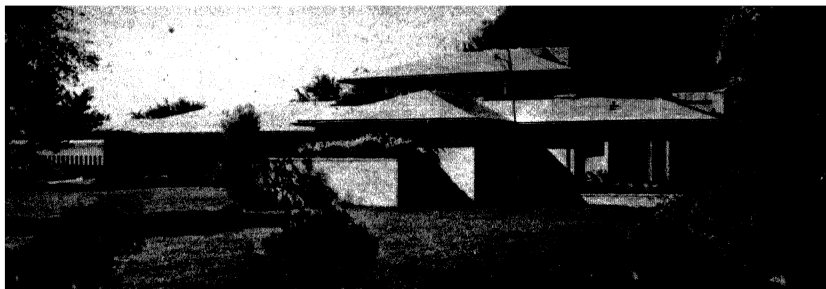
Photograph by courtesy of Cranbrook Academy of Art





Photograph by courtesy of Detroit News

STUDENT VISITORS AT DETROIT INSTITUTE OF ARTS



MODERN RESIDENCE, MIDLAND

AIRVIEW, MARYGROVE COLLEGE, DETROIT



At the Fort Street entrance, a bronze plaque marks the SITE OF OLD FORT SHELBY.

9. The CITY HALL (*open 8:30-8 Tues.; other weekdays 8:30-5*), Woodward Ave. at Cadillac Square, dark with the grime of 67 years, was designed in French Renaissance style by James Anderson and dedicated in 1871. It was built of Amherst stone at a cost of \$519,949. The dominating architectural feature is a 200-foot central tower, in which a watchman was at one time stationed to sound the alarm calling out the Volunteer Fire Department. The old bell, weighing 7,670 pounds, still hangs there. Four figures, each 14 feet high, representing Art, Justice, Industry, and Commerce, decorate the corners of the tower. Niches on the east and west façades hold statues of Cadillac, La Salle, Father Marquette, and Father Gabriel Richard, which were given to the city by the late Bela Hubbard, pioneer surveyor and historian. On the front lawn are two cannon captured from the British by Commodore Oliver Hazard Perry at the Battle of Lake Erie, September 10, 1813.

Only a few of the city's many activities, including those of the mayor's office and the council chamber, are now housed in the City Hall.

10. The DOWNTOWN LIBRARY (*open 9-9 weekdays*), Gratiot Ave. between Library and Farmer Sts., a two-story stone structure in a modern version of the Greek Classical style, was opened in 1932. In addition to general library service, it offers a special information service for businessmen, brokerage houses, statisticians, advertisers, and others. Information is available on variations in security prices, car-loading statistics, taxation studies, real-estate appraisals, credits and collections, office management, and similar topics. Another service, also widely used by businessmen, provides for decoding cables by telephone in a score of standard codes. The FOREIGN LANGUAGE DEPARTMENT, with books in 31 languages and collections in 28 languages, supplies temporary loans of foreign books to all branch libraries in Detroit.

The library stands on the site of the Wayne County jailyard, scene of the last execution under Michigan law. Stephen G. Simmons, proprietor of a turnpike tavern at Wayne (*see Tour 1*), was sentenced to hang for the death of his wife, whom he killed with a blow of his fist while intoxicated. Sheriff Thomas S. Knapp refused to carry out the sentence. 'Uncle Ben' Woodworth, proprietor of the Steamboat Hotel, was appointed acting sheriff by Governor Cass, after Woodworth, in an informal discussion of the trial, had sternly maintained that the law must be upheld at all costs. So great was public interest in the case that, two hours before the execution, spectators crowded the jailyard and many roofs in the neighborhood. Simmons's impressive demeanor on the scaffold engendered a strong reaction against capital punishment, which swept the State and, in 1846, resulted in the abolishment of the law.

11. CAPITOL PARK, State and Griswold Sts., roughly triangular in shape, is the site of Michigan's first capitol, erected in 1828 and oc-

an eight-minute cycle. At the southern entrance of the western section is a bronze statue of Hazen S. Pingree, former mayor of Detroit and governor of Michigan, sculptured by Rudolph Schwartz.

Near the center of the eastern half of the park is the ALGER MEMORIAL FOUNTAIN. Unveiled in 1921, it was designed by Daniel Chester French to commemorate the work of General Russell A. Alger as governor of Michigan (1885-7) and as secretary of war under President McKinley during the Spanish-American War. Not so elaborate as the Edison Fountain, the Alger Memorial has a pedestal of Milford marble, in which a portrait bust of General Alger is incised, surmounted by a bronze female figure representing the State of Michigan. A tablet near by marks the place where Edwin Denby (1870-1929) enlisted in the Marine Corps as a private in May 1917; he became secretary of the navy in February 1921. On the Woodward Avenue side of the eastern section of the park is a statue of William C. Maybury, former mayor of Detroit (1896-1904), sculptured by Adolph Alexander Weinman. A small stone with a plaque on the Adams Avenue side marks the SITE OF DETROIT'S FIRST TOLLGATE, erected in 1849 in the middle of Woodward Avenue.

14-15. The DETROIT INSTITUTE OF TECHNOLOGY (14), in the downtown Y.M.C.A. Building, 2000 Witherell St., and in the College Building, John R. and Elizabeth Sts., and the (15) DETROIT COLLEGE OF LAW, 130 E. Elizabeth St., are incorporated separately, but together they constitute the educational branch of the Detroit Y.M.C.A. The institute began primarily as an evening school, organized in 1891 as the Association Institute. Incorporated under its present name in 1918, it comprises four colleges—liberal arts, commerce, engineering, and pharmacy—and an evening high school for men. The pharmacy college was begun in 1890 as a department in the Detroit College of Medicine. This connection was terminated in 1905, and in 1907 the pharmacy college became a part of the institute. The engineering laboratories, in the College Building, are well equipped for research and experimentation in the chemical, physical, mechanical, and electrical fields. Many courses in the engineering college are open to men who have had practical experience but little scholastic training.

The Detroit College of Law was founded in 1891. Its first president was Charles D. Long, chief justice (1888-97) of the Michigan Supreme Court. In 1937 the law college was housed in a new four-story limestone building, trimmed with bronze and aluminum and embellished on the exterior by a carved figure of Justice and ornament in low relief.

16. The CENTRAL METHODIST CHURCH, Woodward and Adams Aves., built of limestone and designed by Gordon W. Lloyd, in modified early English Gothic style, has stood as a landmark of Grand Circus Park and the business district since its completion in 1867. The 185-foot steeple has been hedged in gradually by tall buildings, and the congregation no longer is wholly composed of near-by residents, although it includes many who live in downtown hotels and rooming

houses. This is the oldest Methodist group in Detroit. The first Protestant (Methodist) society in Detroit was organized in 1810.

When the widening of Woodward Avenue became necessary in 1937, the church was shortened, and the 2,000-ton tower moved back intact 26 feet, 9 inches, and shifted 8 feet, 6 inches nearer Adams Avenue, the street intersecting Woodward.

BELLE ISLE POINTS OF INTEREST

17. GABRIEL RICHARD PARK, E. Jefferson Ave. at E. Grand Blvd., adjoining the E. side of the Belle Isle Bridge approach, was cleared and purchased in 1927 at a cost of \$8,200,000. For years the site was occupied by an amusement development, which was finally condemned. At first called Riverside Park, the tract was renamed in 1936 to honor Father Gabriel Richard (*see Social Institutions*). On this site, then part of the Malcher 'ribbon' farm, *La Chapelle du Nord Est* was erected in 1803 to serve the eastside farm parish, under Father Richard's jurisdiction. A 16-foot granite statue of the noted priest is being prepared (1940) by Leonard Jungwirth, Michigan Art Project sculptor, to be erected here.

18. BELLE ISLE BRIDGE, E. Jefferson Ave. at the foot of E. Grand Blvd., is reached from street and subway levels. The original wood-paved and steel Belle Isle Bridge, built in 1889 and destroyed by fire in 1915, was succeeded by a temporary structure. The \$390,000 subway, part of the bridge development, was completed in 1919. The present bridge was finished in 1923 at a cost of \$3,000,000. It is 2,193 feet long, with a 12-foot pedestrian walk and four motor-traffic lanes each way. It comprises 20 cantilever spans, varying in length from 74 to 135 feet, with a maximum elevation of 37 feet above the level of the water.

BELLE ISLE PARK (*bus service from bridge approach to park; transfers from streetcars and busses accepted; ferry from E. of bridge approach; numerous picnic grounds, with stoves, tables, and water outlets; supplies at Casino*) occupies the whole of an island that lies about one-half mile offshore in the Detroit River. Belle Isle has not always been the peaceful haven and recreational center it is now, nor has it always borne such a pleasant name. To the Indians it was known variously as Swan Island or Rattlesnake Island, because of its many snakes and the fact that it was a resting place for migratory swans. Detroit's founder, Antoine de la Mothe Cadillac, named it *Isle La Marguerite*, for his daughter. Later in the eighteenth century, French settlers, wishing to make the island habitable, placed a large drove of hogs on it to destroy the rattlesnakes. As a result it became known as *Isle au Cochon* (Fr., Hog Island), a name that clung until it was christened *Belle Isle* (Fr., Beautiful Island) in 1845, supposedly in honor of a daughter of Lewis Cass, former governor. The name was not officially accepted until 1881.

Cadillac had set the island aside as a common grazing ground, 'free

from the mischievous savages and depredations of wild animals.' In 1780, an English officer of the garrison, Lieutenant George McDougall, having been granted the land by George III, obtained a deed from the Chippewa and Ottawa in exchange for articles valued at £194. Fourteen years later, it cost William Macomb £1,594; in 1817, his heirs obtained \$5,000 for it from Barnabas Campau, who operated a fishery there. From that date, although it was privately owned, the island was popularly considered city property. It was used for picnics, as a dueling ground, and as a place of quarantine for troops during the cholera epidemic of 1832. In 1879, the city of Detroit purchased Belle Isle for \$200,000. It then contained about 768 acres, but, in 1940, through reclamation of land, the area had been increased to about 985 acres. Improvements also helped to increase the island's value, which is now estimated to be \$32,000,000.

The island, 2 miles long, has 20 miles of shore and intra-island driveways, about 5 miles of gravel walks, and 2 miles of bridle paths. The shore drive, which encompasses the island except for the reclaimed area at the eastern end, is a one-way street; traffic is directed to the right from the bridge. This road is called the Strand between the bridge and the head of the island, where it becomes Lakeside Drive; along the northern shore, from the head to the bridge, it is called Riverbank Road. The main crossroad, about a third of the way up the island, is Inselruhe Avenue, and the chief east-and-west roadway is Central Avenue.

19. The CANOE SHELTER (*open May to Sept.*; \$2.00 deposits, 20¢ an hour for canoes), on Pleasant Place, affords storage for both privately owned canoes and a large fleet of craft for rent. Here begins the system of lagoons or canals that leads across and almost entirely around Belle Isle, joining artificially created Lakes Takoma, Okonoka, and Muskoday. The waterway is supplied with fresh water by centrifugal pumps.

20. The SCOTT MEMORIAL FOUNTAIN, designed by the late Cass Gilbert, who was chosen in a Nation-wide competition (as he was similarly selected to plan the Detroit [Main] Public Library building), is a large and appealing Classic monument in white marble. The diameter of the entire fountain, with its central bowl, its pools, and wide base, is 510 feet—that of the main part, 112 feet. A central spray that rises 125 feet into the air is supplemented by 108 others, the waters of which form part of the design of the monument.

Upon the death in 1910 of Jim Scott, descendant of a pioneer family, his will was found to bequeath \$200,000 to the city for a fountain on Belle Isle, with the proviso that a statue of himself be included. The matter was held in abeyance for years because of protests by citizens who did not wish the man's memory to be perpetuated. Meanwhile the legacy was increasing in value. In 1925, the fountain was completed at a cost of \$500,000, and a bronze statue of Scott, a seated figure modeled by Herbert Adams of New York, was placed as inconspicuously as possible at one side.

21. At the CASINO (*open May-Sept.*) on Casino Way, a large buff-brick building surrounded by a two-story veranda, light refreshments and supplies, such as charcoal for picnic fires, can be purchased on the first floor; on the second is a dining room with facilities for serving on the upper porch.

22. The SKATING PAVILION, on Wayside Place and Lake Takoma, is the center of island activities during winter, as the lake is the chief skating pond on Belle Isle.

23. An outdoor SYMPHONY SHELL, between Loiter Way and Lake Takoma, is used in summer for band and orchestral concerts, for native-dance programs offered by Detroit's racial groups, and occasionally for dramatic productions, all presented free of charge (*see Music and the Theater*). The largest audiences are probably those attracted by Easter sunrise services, sponsored annually by the *Detroit News*.

24. The ROSE GARDENS, in a large, slightly sunken area on Loiter Way, are glorious in summer with the fragrance and color of a variety of blooms. The profuse flowers and shrubbery on the island (as throughout the park system) are planted by the Department of Parks and Boulevards, assisted by staff members at the island conservatory.

25. In the Rose Gardens is the BARBOUR MEMORIAL FOUNTAIN, designed by Marshall Fredericks, instructor of modeling at Cranbrook School (*see Tour 5A*), and erected in 1936 with funds willed by the late Levi B. Barbour, Detroit philanthropist. Fredericks's design was selected from 24 entries by an out-of-town jury of eminent architects and sculptors. Figures of various animals found on the island are carved in the rim of a shallow basin. Around the base of a central shaft of black marble are grouped four small granite figures—a hawk, a rabbit, a grouse, and an otter—representing some of the wild life once native to Belle Isle. Above the marble block is the bronze figure of a gazelle, with swerving head and forelegs, as if checking its flight at the edge of a cliff.

26. BELLE ISLE CONSERVATORY (*open 9-5 daily*), adjoining the Rose Gardens, stages six shows each year: calceolarias and primroses in January; lilies, hyacinths, and rhododendrons at Easter time; hydrangeas and fuschias in May; foliage plants during the summer; the very popular chrysanthemum show in November; and a Christmas display of poinsettias, stevia, and Cleveland cherries. There is a large permanent exhibit of foreign and domestic horticultural specimens, from grasses to trees.

27. The AQUARIUM (*open 9-5 daily*), in a structure that is joined to the conservatory by an ell of that building, is the sixth largest in the world. In its glass-fronted wall tanks are 45 species of native North American fresh-water fish.

28. The ZOOLOGICAL GROUNDS and ANIMAL SHELTER, bounded by Central Ave., Inselruhe Ave., and Loiter Way, contained the city's main animal exhibits until the Detroit Zoological Gardens (*see Tour 5a*) were opened in 1929. Here are herds of buffalo, elk, and deer, cages of smaller animals, mostly native to North America,

monkey exhibits, and flocks of peacocks and other brilliantly colored birds, including several rare varieties. Deer roam at will in the forests on the island; half-tame squirrels and pheasants can be coaxed within feeding distance.

29. An ATHLETIC FIELD, extending from mid-island to the Strand, along the Canadian shore side, has a gridiron, six baseball diamonds, ten tennis courts, and areas for rows of tents that are erected on annual field days. Many outdoor scholastic events are held on this field. The Field House, operated in connection, supplies refreshments.

30. A MODEL-YACHT BASIN, on the Strand, opposite the Athletic Field, is 1,000 feet long and extends into the river 200 feet. The basin is used for local, national, and international races.

31. The SAMUEL FRANCIS SMITH MEMORIAL, at the junction of Vista Ave. and the Strand, erected in honor of the author of 'America,' consists of a 90-foot flagpole rising from a marble base that rests upon an octagon sub-base of three granite steps. One side of the base bears a sculpture-portrait of Smith, and in another are cut the verses of 'America.' The monument was built with funds contributed by Detroit school children.

32. The BELLE ISLE LIGHTHOUSE, at the southeastern tip of the island, opposite Lake Okonoka, was the only Belle Isle light for Great Lakes navigation between 1882 and 1930. Originally it emitted a light of the fourth order from its lantern, 42 feet above river level. Today it has a fixed green light, supplementing the flashing signal of the Livingstone Light.

33. The LIVINGSTONE MEMORIAL LIGHTHOUSE, 1,800 feet from Lakeside Drive, on the reclaimed land comprising the eastern tip of the island, is a solid shaft of Georgian marble designed by Albert Kahn, Detroit architect. Probably the world's only marble lighthouse, it was dedicated in 1930 in memory of the late William Livingstone, prominent resident and, for nearly a quarter of a century, president of the Lake Carriers' Association, whose members, along with other citizens, erected the \$100,000 monument. The simple, dignified, 58-foot shaft tapers gradually to its bronze lantern cap; at the base is a heavy bronze door and a bronze portrait of Livingstone in high relief, modeled by Professor Géza Måróti. Maintained by the United States Lighthouse Service, it contains an incandescent lamp of 8,600 candle-power, an occulted type that flashes every 10 seconds a white beam visible for 15 miles.

Along this end of the island, where the Strand becomes Lakeside Drive, both mainland shores are clearly visible. Boats can be seen far out on Lake St. Clair, which narrows to the Detroit River a short distance above the island. During navigation season, Great Lakes passenger boats and freighters pass on an average of one every 20 minutes, day and night; all but pleasure craft keep to the main channel, which lies off the southern shore, midway between Belle Isle and the Canadian banks.

34. The BELLE ISLE RIDING ACADEMY (*open 7 A.M. to dark; \$1 an hour weekdays; \$1.50 Sun. and holidays*), at the center of the island head, on Lakeside Drive, is one of Belle Isle's few private concessions. Bridle paths lead through the most densely wooded section, much of which is covered with native forest. The roof of the stable once covered the city market that for many years stood in Cadillac Square.

35. The PUMPING STATION, a gray-stone building on a reclaimed arm of land along the north headland, is a part of the gigantic city waterworks system (*see Waterworks Park*).

36. The DETROIT YACHT CLUB (*private*) occupies a large clubhouse, designed along Spanish Renaissance lines by George D. Mason and Company, Detroit architects. The cornerstone was laid in 1922 by Gar Wood (*see Tour 8*), pioneer power-boat racer and builder. It stands upon land reclaimed at the expense of the club's stockholders in exchange for a 99-year lease from the city. The site is actually a small island, and craft tie up on all sides. A course for power-boat racing lies on this side of the river, from the bridge upstream past the yacht club; the judges' stand is established on the club's dock. Events have included the famed Harmsworth Trophy Race. Venetian Night, held annually at the yacht club, is a high point in the Detroit mid-summer social season.

37. The BELLE ISLE GOLF COURSE (*25¢ for 9 holes*), Riverbank Road and Oakway, is a nine-hole course lying along the southern shore of Lake Muskoday, largest of the artificial lakes. Par is 31.

38. The BELLE ISLE BATHHOUSE (*open 8 A.M. to dusk, June-Sept.; 15¢ adm. includes suit, towel, locker*) is a \$200,000 structure capable of accommodating 20,000 bathers daily; hot days bring many thousands more to bathe at other beaches on the island, without benefit of bathhouse facilities. The beach is clean and patrolled by life guards.

39. The DETROIT BOAT CLUB (*private*), on the N. bank, upstream from the bridge, has occupied its property since 1891, under the same terms as those of the Yacht Club. This, the oldest river-club in the United States, was organized in 1839 when a group of Detroiters bought a four-car clinker-built boat in New York. The following year, a Crolins boat, then the favorite make of racing craft, was purchased and brought west through the Erie Canal. Two years later these boats were pulled in a straightaway race from the boathouse, then on the Detroit bank, to Hog Island (Belle Isle); and it is recorded that an 'enthusiastic interest was shown as it was the first event of its kind in the Western Waters.' The club moved to the island and formally opened a clubhouse in 1891, but the present fireproof building was not erected until 1902, after three disastrous fires destroyed the earlier quarters.

ART CENTER POINTS OF INTEREST

The ART CENTER, two main buildings and several subsidiary units, covering an area of several acres on both sides of busy Woodward Avenue in the vicinity of Kirby Avenue, is Detroit's outstanding cultural achievement. Its broad lawns, marble buildings, and fine old trees are an oasis of peace and tranquility, in contrast with the hustle and bustle characteristic of the rest of Detroit's main business artery.

In 1910, the old Museum of Art, situated at 704 E. Jefferson Avenue since 1886, sought a new location adequate for its future needs. The present site of more than two city blocks, between Farnsworth and Kirby Avenues on Woodward Avenue, was purchased by popular subscription. The Detroit Public Library, also in need of more spacious housing, two years later obtained a corresponding area on the opposite (west) side of Woodward Avenue. The co-operation of the library board and the museum's trustees in planning the two buildings insured their architectural harmony. In 1927, the success of the joint efforts became evident when, six years after the Library had been completed, the Institute of Arts was opened to the public. These buildings, nucleus of the civic Art Center, have dignity and beauty and are admirably adapted to their purpose.

Development of the Art Center has been well received, and, in its immediate vicinity, many new buildings have sprung up. Wayne University, on near-by Cass Avenue, is extending its development toward the west side of the Art Center. Modern apartment houses, a large hotel, the Maccabees Building, the Merrill-Palmer School, and the Scarab Club are situated close to the Art Center. Substantial private residences, erected in the early 1900's on near-by tree-shaded avenues, have been transformed into multiple-unit living quarters, which house business people and many young artists, writers, and musicians.

40. The DETROIT INSTITUTE OF ARTS (*open 1-5, 7-10 Tues., Thurs., and Fri.; 1-5 Wed.; 9-5 Sat.; 2-6 Sun. and holidays; catalog of building, \$1; permanent collections guide, 25¢*), 5200 Woodward Ave., was designed by the Philadelphia architect, Paul P. Cret, with the assistance of Zantzinger, Borie, and Medary. Cret chose Vermont marble as the structural material most suited to the edifice's style, a modified form of Italian Renaissance. Its cost of \$4,000,000 was defrayed by general taxation. The structure's greatest beauty lies in the excellence of the treatment of mass and proportion. Terraced steps rise in easy flights to the level of the main floor and give access to the building through an entrance of three arches springing from Ionic columns. Bronze reproductions of Italian sculpture occupy niches in the end bays—*St. George* by Donatello (R) and *The Slave* by Michelangelo (L). At the sides of the broad steps are bronze casts of French Renaissance figures—the heroic *River God* by Coysevox and *Nymph* by Philippe Magnier; these, with the gardens and lawns, form integral parts of the general composition.

The institute is an outgrowth of the Museum of Art Corporation organized in 1885 (*see Artists and Craftsmen*). Participants in that body are now members of the Detroit Museum of Art Founders Society, a group that immeasurably strengthened the cultural life of Detroit, by gifts of art works and donations of funds, during the years when the city was forced to curtail the institute's income.

The Institute of Arts is notable both for the arrangement of its galleries, which follow the development of civilization in historical sequence, and for the grouping in comprehensive exhibits of the various forms of art—painting, sculpture, and decorative arts—as the collective expression of a culture. The collections are notable for the completeness with which they represent the history of art. The institute has specialized in Italian Gothic sculpture and the northern European painters. Also it is making very definite contributions to art developments in the quality of the loan exhibits that are periodically shown. Among these was the Rembrandt Exhibit, one of the most comprehensive collections ever gathered.

The layout of galleries attests the technical ability of the architects in planning from the inside out, but a good measure of credit must go to Dr. W. R. Valentiner, art director of the institute, for the functional projection of the architects' design. The collections are arranged on one main floor in a series of period rooms, planned, furnished, and lighted to create appropriate backgrounds, avoid monotony, and spare the visitor the effects of 'museum fatigue.' According to Richard F. Bach of the Metropolitan Museum of Art, New York, 'This building and its collections have made a distinct contribution to museum theory and practice in the United States; have in truth made fact out of much that could hitherto be classed only as experiment.'

The concourse or great hall is directly ahead from the foyer, and beyond that is the garden court. To the right of the foyer is the European section, with 17 rooms arranged around an open courtyard. Beginning with the first gallery, the rooms in this block of building are arranged to offer a retrospect of western civilization, beginning with the present century and going back to the days of the early Christians. The detail of the early-Christian room is representative of the careful treatment of backgrounds: stone-vaulted roof, rough-plaster walls studded with sculptured ornaments, and an early Romanesque altarpiece, which forms the focus of the room, provide an appropriate setting for the exhibits of this period.

Left of the foyer is the American section. Beginning with contemporary painting, sculpture, and handicraft, it retraces the years to a display of the arts and crafts of Colonial days. A corner gallery housing contemporary art was decorated in 1936 with a fine series of ceiling frescoes by John Carroll (*see Artists and Craftsmen*). In the Colonial section is part of an eighteenth-century Pennsylvania country house, Whitby Hall, with original paneling, moldings, and fireplaces.

Left from the concourse, where sculptured pieces of heroic proportions are often on display, are three galleries for temporary exhibits,

arranged so as not to interfere with permanent displays on other parts of the main floor.

The entrance to the garden court, at the far end of the concourse, is enhanced by a hand-wrought iron gate by Caldwell. Right from this court are rooms containing Greek and Roman antiquities and Egyptian, Persian, and East Indian arts. The galleries of the Far East are to the left. The garden court itself has become widely known for the much-discussed murals that Diego Rivera completed in 1933 (*see Artists and Craftsmen*). Originally a Baroque interior garden, with a fountain, many plants, and a colored canvas hung in the high roof to soften the light, the court has become an exhibition room for Rivera's fresco-murals, and the Baroque architectural details have been somewhat simplified to furnish a more appropriate setting for the 27 panels, entitled *Detroit Industry*.

One of the most distinctive features of these murals is the portrayal upon a few square feet of wall-space of multifarious factory activities that appear to extend for thousands of feet. The murals can be studied to best advantage from the stairway that rises from the loggia at the rear of the court. The stairway leads to the theater, entered from the halfway landing, and also to five small galleries, the only ones above the main floor. These galleries contain examples of modern art. By this arrangement the most difficult problem of museums is solved, for here 'the new and *outré* may have its seasoning,' before it earns a place in the galleries below.

On the ground level are galleries of prints, drawings, textiles, Romanesque art, and American and European prehistoric art. On this floor, also, are a reference library, a small lecture hall (seating about 400), equipped for use by the educational staff or visiting lecturers, and, at the rear, a large auditorium with a stage and pipe organ, used for musicales, lectures, dramatic performances, and kindred purposes.

In the EGYPTIAN SECTION, the stone *Portrait Head*, of the XII Dynasty, and a small *Seated Scribe*, of the XVIII Dynasty, are of exceptional quality. In the same gallery is the *Dragon of Bel-Marduk*, a glazed tile relief from the Ishter Gate of Babylon, built by Nebuchadnezzar in the seventh century B.C. In the ROMAN ROOM is a series of portrait heads of emperors. In the GREEK ROOM is the *Head of a Bearded Man*, an Athenian work of the first half of the fifth century B.C. In the CHINESE GALLERIES are *Early Autumn* by Ch'ien Hsüan, a masterpiece of Chinese painting; the gilt Maitreya, *Buddha of the Future*, of the Northern Wei Dynasty, and a *Colossal Head of a Lion*, T'ang Dynasty. The outstanding piece in the JAPANESE SECTION is a screen, *Pipe Tree and Waterfall*, by Korin. In the PERSIAN GALLERIES, the most important pieces are the *Silk Animal Carpet*, seventeenth century, and the *Combat of Ardashir and Adruwan*, a scene from a fourteenth-century miniature.

In the ITALIAN SECTION, a group of Italian Gothic sculptures is outstanding in this country; the *Madonna and Child* by Nino Pisano is the most notable piece. The Florentine school is well represented.

Among the rarer items are *Saint John* by Andrea del Castagno, *Judith* by Antonio Pollaiuolo, *Head of Christ* by Botticelli, and *Portrait of a Lady* by Verrocchio or Leonardo da Vinci. The most important of the Sienese school is the *Procession to Calvary* by Sassetta, one of the best known of his works. The Umbrian school is exemplified by two small pictures of Signorelli and a *Portrait of a Donor* by Raphael, an unusual and extremely interesting fragment of a lost altarpiece. Three early pictures of Correggio are among the representations of the North Italian school. The crown of the Italian group is its great collection of paintings by the Venetian masters, Tiepolo, Tintoretto, Giovanni Bellini, and Titian (the institute has one of the noted groups of Titian's paintings in this country). The Baroque collection includes *The Fruit Vendor* by Caravaggio, *Portrait of a Man* by Velasquez, *Selene and Endymion* by Poussin, *Girl with a Candle* by Georges de la Tour, and *Village Piper* by Antoine LeNain.

THE DUTCH and FLEMISH ROOMS, housing a collection that ranks with the best in the United States, contain the work of such painters as Jan van Eyck, Pieter Breughel, and his contemporaries who figure seldom in American collections. Other valuable paintings in these rooms are Rubens' *David and Abigail* and *Portrait of His Brother, Philippe Rubens*, Rembrandt's *The Visitation*, Solomon Ruysdael's *Canal Scene*, Jacob van Ruysdael's *The Cemetery*, and Hercules Saghers' *Landscape*. Here, too, is a unique group by the architectural painters, especially three paintings by Emanuel de Witte; and still life painters including Jan Breughel and Kalf.

The strength of the AMERICAN SECTION is its comprehensiveness, covering as it does the development of American painting from the eighteenth-century portrait painters to the present day. This section includes Badger's *John Adams*, Trumbull's *John Trumbull the Poet*, and works by Stuart and by Copley; in a group of landscapists and portraitists of the early nineteenth century is Bennett's *View of Detroit in 1836*. American impressionism is represented by the work of W. M. Chase and Gari Melchers; the twentieth century by Sloan's *McSorley's Bar* and John Carroll's *Frescoes of Morning, Noon, and Evening*.

The collections of twentieth-century art are notable for the Rivera frescoes, already mentioned, and for the important group of modern French, German, and Italian painters and sculptors. On the ground floor is a PERMANENT EXHIBIT OF DRAWINGS, ranging from medieval illustrations to modern works. Notable pieces are a letter S with a miniature of the Pentecost by Lorenzo Monaco, Florentine, fifteenth century; *Study of the Sistine Ceiling* by Michelangelo; *Caricature* by Leonardo da Vinci; *Peasants in a Tavern* by Brower; *Man Seated* by Pieter de Hooch (his only known drawing); *Park Scene* by Fragonard; *Bather* by Degas; and *Portrait of E. Forert* by Picasso.

41. THE DETROIT (MAIN) PUBLIC LIBRARY (open 9-9 weekdays, 2-9 Sun.), W. side of Woodward Ave. at Kirby Ave., a white Vermont marble structure in early Italian Renaissance style, set a new and high standard of excellence for Detroit public buildings, when

completed in 1921 at a cost of about \$3,000,000. In the front section there are but three floors, as disclosed by the façade; elsewhere, an additional and intermediate floor, lighted from wall openings at the sides, lies between the first and second (main) floors. The architect, chosen through Detroit's most important competition, was Cass Gilbert (1859-1934) of New York. The façade is an especially good example of Gilbert's skill in the treatment of mass and detail. From a heavy molded sill course rises the first story, a delicately rusticated wall, capped by a bold belt course and pierced by molded openings, forming a base for the structure. The main feature of the second story is a loggia of seven high arches, framed by the fluted Ionic pilasters that support the entablature, whose cornice-sheltered frieze is broken by small windows and enriched by carving. The signs of the zodiac, sculptured in low-relief panels, adorn the upper story. The cornice is crowned by an ornamental cresting in terra cotta of old ivory tone backed with gold.

The vaulted ceiling of the loggia is decorated with mosaics depicting *Shakespeare's 'Seven Ages of Man,'* designed by Frederick J. Wiley and made of Pewabic Pottery materials. The bronze doors of the only public entrance, center front, contain ten panels done in low relief. These, inspired by Donatello's handiwork, portray allegorical scenes in the Classic Greek and Roman manner, pertaining to epic, tragic, and lyric poetry, to comedy and philosophy.

Inside the building, two rows of Roman Doric columns of Tennessee marble, set well out from the walls, lead through the entrance hall to the foot of the grand stairway. Here, as throughout the building, the general sobriety of design is relieved by a richly coffered ceiling, in this instance of pure sixteenth-century Italian pattern. Left of the entrance is the Periodical and Reading Room. The Children's Reading Room (R) is of particular interest for its fireplace of Pewabic Pottery, designed by Mary Chase Stratton and Horace J. Caulkins (*see Artists and Craftsmen*). Behind the Children's Room, on the north side of the building, is the Schools' Department, from which books are supplied to elementary school libraries and classrooms; it maintains a Parents' and Teachers' Room, with reference and circulating books. The halfway landing of the tripartite stairway, also of Tennessee marble, is on the mezzanine level; here are the librarian's offices, other staff offices, and public rest rooms.

Arching over the stairway and the second-floor hallway is a barrel-vaulted ceiling, the most elaborate in the building, treated in a manner closely resembling the Raphael arabesques in the Vatican. The painted glass windows at each end of this hall, and nine others in the library, were designed by W. F. Paris and Frederick J. Wiley. Large wall spaces are filled with murals by Edwin Blashfield, some of which symbolize poetry, music, prose, and the graphic arts; in these compositions, the artist has used the likeness of men who achieved greatness in their respective fields.

The Delivery Room, on the second floor, is a focal point for the

departments of this building and the main concourse for the traffic of the entire Detroit Public Library system, which consists of 18 branches. Capacity of the main library building is 800,000 volumes. Murals on the walls of the Delivery Room by Gari Melchers, Detroit artist (*see Artists and Craftsmen*), depict the arrival of Madame Cadillac at Detroit in 1702 and Pontiac's unsuccessful attempt to capture the fort in 1763. The central panel, *The Spirit of the Northwest*, over the arch to the main hall, shows the pathfinder and the trapper of early days; above them is the figure of Sainte Claire, in whose honor La Salle named Lake St. Clair. Above the doorway are Blashfield murals symbolic of early and modern Detroit.

Accessible from the Delivery Room are the Open Shelf, Music and Drama, Fine Arts, and Reference Rooms. The Poetry Room and the Readers' Assistant's Room are in the short passageway right of the Delivery Room; the Card Catalogue is in a similar passageway, left. The Fine Arts Room, extending across the center front of the building, opens on the loggia. Displayed in the Fine Arts Room is the library's rarest possession, a diary of George Washington, narrating events in his life between October 1789 and March 1790. In transferring the diary to the library, its donor, Henry B. Joy, stipulated that the volume should be kept within the limits of Detroit. The Reference Room, in addition to 5,000 volumes of reference works, houses a collection of early English and American periodicals, said to be one of the most comprehensive in the United States.

The third floor, reached most conveniently by elevator from the north-and-south hall, which parallels the Fine Arts Room, contains clubrooms, a staff lunchroom, a small auditorium, and the Social Science Department. At the north end of the hall is the Burton Historical Collection, which, built around a private library presented to the city in 1914 by Clarence M. Burton, is one of the most important collections of its kind in America. The Burton Endowment Fund, created for the purpose of gathering further data on Detroit and on the development of the old Northwest, has added much new material to the collection, to which public-minded citizens have also contributed. The collection now contains more than 110,000 volumes, pamphlets, manuscripts, and maps, hundreds of prints, and several thousand unmounted letters. Of particular historical value are the papers of John Askin, Solomon Sibley, William Woodbridge, William C. Maybury, the James F. Joy manuscripts, and the Hazen S. Pingree scrapbooks.

42. The DETROIT PUBLIC LIBRARY TECHNOLOGY DEPARTMENT (*open 9-9 weekdays, 2-9 Sun.*), 96 Putnam Ave., occupies a remodeled and enlarged three-story house on the south lawn of the library grounds. The department serves all branches of applied science, engineering, and business.

43. The DETROIT CHILDREN'S MUSEUM (*open 1-4 Mon.-Fri.; 9-4:30 Sat.*), 5207 Cass Ave., W. of the library, housed in a two-story brick structure, formerly a private residence, has biological, historical, geographic, and art exhibits, which are loaned to Detroit

schools for classroom study and educational projects (*see Artists and Craftsmen*). A number of dioramas illustrate important events in United States and Michigan history. The library contains 10,000 pictures and charts in color and 150,000 photographs.

44. The CHILDREN'S HOUSE (*open Fri., by permission*), 36 W. Kirby Ave., N. of the library, is a privately endowed free school, with headquarters in a large, renovated carriage house. Pupils are achieving remarkable results in the creative arts, by methods that are attracting the attention of educators and artists (*see Artists and Craftsmen*).

45. The MERRILL-PALMER SCHOOL (*nursery school open by appointment 9-12 Mon.-Fri.*), 71 E. Ferry Ave., primarily an institution for education in home and family life, was founded in 1920 under the will of Lizzie Merrill Palmer, widow of Senator Thomas W. Palmer of Detroit. Since its establishment, it has been under the direction of Edna Noble White. The student program consists of courses in child development, family life, parent education, and nursery-school teaching. The training is specially intended for senior and graduate women students from colleges and universities throughout the country that have established co-operating relations with the school and give credits for the work taken. Students, in residence for periods varying from a term to a year, number between 80 and 90 annually; the staff is composed of about 40 persons.

A number of service projects have been established to give students opportunities for firsthand observation and experience with children. These services include the Infant Service, Nursery School, Recreational Clubs, and the Merrill-Palmer Camp. The Nursery School, opened in January 1922, is one of the oldest in the United States. Enrollment is limited to 35 children from 2 to 5 years of age; educational programs for the parents of children enrolled in these services are also conducted.

The Merrill-Palmer School is quartered in seven former residences in the first block of Ferry Avenue, East. The headquarters, No. 71, a two-and-a-half-story stone and shingle structure designed by Wilson Eyre, Philadelphia, is the former home of Charles Lang Freer, donor of the Freer Art Gallery in Washington, D. C.

46. The SCARAB CLUB (*open by permission*), 217 Farnsworth Ave., E. of the Institute of Arts, is a modern, vigorously designed brick building, set flush with the sidewalk building line. Above the severe plank door, on the third-story level, is a large, brilliantly colored scarab, the only insignia on the three-story structure. An outgrowth of the Hopkin Club (*see Artists and Craftsmen*), the Scarab Club's purpose is to stimulate and guide Detroit artistic interests, to promote acquaintanceship between artists and the public, and to advance general knowledge of the arts. The clubhouse is maintained to provide social, working, and exhibition facilities for artist members; associate members (business and professional men) have increased the membership from the original 25 to 350. On the first floor is a large gallery, where works of Scarabs are usually on display. The Scarab Ball, an annual social event since 1917, is usually the city's most spectacular

party. Sketch classes, discussions, and research of general value to artists are the serious year-round pursuits.

47. WAYNE UNIVERSITY, 4841 Cass Ave., one block from the Art Center group, is a public university organized in 1933. Although its 11,822 (Oct. 26, 1939) full-time and part-time students have placed it as the sixteenth largest university in the country for the second successive year, Wayne holds the unusual position of being an integral part of Detroit's educational system. As such it is directly subject to public control, its Board of Regents being the elective Detroit Board of Education and its president the city's superintendent of schools. The university is closely linked with the everyday life of Detroit. Three-fourths of the students have part-time jobs, and thousands of adults are enrolled in an unusually wide range of night courses.

The executive offices of the university are in the old (1896) Central High School building, a three-story structure of weather-stained yellow brick, designed by Malcomson and Higginbotham in a version of the Romanesque. Since its organization in 1933, the university's enrollment has doubled, and its plant has expanded northward along Cass Avenue toward the Detroit Library and the Institute of Arts. In the last five years, 14 former residences have been leased, making a total of 23 buildings now used by the university. The Wayne campus, however, can be said to extend over the entire metropolitan Detroit area, for the university co-operates with more than 100 institutions and service agencies in the community.

Wayne University has colleges of Liberal Arts, Education, Medicine, Pharmacy, and Engineering, a Law School, a Graduate School, a School of Public Affairs and Social Work, and a School of General Studies. The acquisition of three city blocks north of Warren Avenue between Cass and Second Avenues, which would integrate the Wayne campus with the Detroit Public Library and the Art Institute, was recommended by a citizens' committee in 1936. Following this recommendation, the Board of Education voted to proceed with preparation for condemnation; and the new area will be added to the university's holdings when funds become available.

Wayne traces its origin to a small teacher-training class in 1868, which later grew into the City Normal School. In 1921, as the Detroit Teachers College, it offered a four-year course in education. The College of Education now uses the Detroit city schools as teacher-training laboratories, and graduates include a majority of Detroit's school teachers.

The Medical School, with headquarters at 1512 St. Antoine St., near St. Mary's and Receiving Hospitals, was privately organized in 1885. In 1918, it was taken over by the Board of Education and renamed the Detroit College of Medicine and Surgery. It became the College of Medicine of Wayne University in 1933. The College of Pharmacy, 625 Mullett St., established in 1923, performs valuable work for various city departments, analyzing foods, soaps, drugs, and other materials.

The Liberal Arts College began as an outgrowth of the Detroit

Junior College, an extension of Central High School. In 1923, the junior college was made into a four-year institution known as the College of the City of Detroit. The Liberal Arts and Engineering Colleges are in the main building. The Wayne University Law School, organized in 1927, holds classes in the High School of Commerce, 2330 Grand River Ave. The School of General Studies gives college courses for those not interested in obtaining degrees. The School of Public Affairs offers courses in social sciences to upperclassmen and graduate students.

The WAYNE GENERAL LIBRARY (*open 8:30-9 school days, 8:30-4 Sat.*), in the main building, contains 80,000 volumes and is a depository for publications of the Federal Government. Special libraries are located in the buildings of the other colleges.

48. ST. PAUL'S CATHEDRAL (Protestant Episcopal), 4800 Woodward Ave., a large, cruciform Gothic style structure of limestone, was designed by Cram, Goodhue and Ferguson, Boston architects, with George D. Mason of Detroit as associate architect. The cornerstone was laid in 1908; the building was dedicated in 1911 and consecrated in 1919.

St. Paul's parish, organized in 1824, was the first Protestant Episcopal group in the Northwest. The age of the church and the devotion of its members are attested by the cathedral's accumulation of art treasures. There are more than 40 stained-glass windows, 12 of them thirteenth century in design, made by Charles Connick (Boston), Heaton, Butler, and Bayne (London and New York), Mayer and Company (Munich), and Powell and Company (London). In the chancel is the 'Passion Window' by Heaton, Butler and Bayne, which portrays 17 scenes of Christ's life. The Rose Window by the same artists, high above the gallery in the west end of the nave, represents the four Evangelists. The work of Charles Connick is displayed in the 'Te Deum Window,' among others, in the north transept. Nearly all of the exquisite woodcarving in the cathedral is by Johann Kirchmayer. Tiling by the Pewabic Pottery surfaces the floor of the spacious sanctuary, behind the communion rail; medieval arts appear in fine wrought-iron gates and in the massive sculpture-bearing narthex screen of stone. The framed church banner, which hangs near the Bishop's stall, is of twelfth-century Venetian workmanship; it represents the Holy Mother and Child.

NEW CENTER POINTS OF INTEREST

The NEW CENTER GROUP, W. Grand and Second Blvds., three modern office buildings towering above a section of small shops and residential streets, symbolizes the growth of Detroit during the automotive age. Nearly three miles from downtown Detroit, these buildings are ostensibly an effort to overcome urban congestion by designing a new center of business activity removed from the downtown area; actually, they are a memorial to one of the most spectacular stars in the automotive firmament—William Crago Durant.

The invention of the two-cylinder Buick engine by David Buick and his two collaborators, Walter Marr and Eugene Richard, set the stage for Durant's entry into the automotive industry, although he had previously been identified with the manufacture of road vehicles for almost 20 years. (*See Dearborn and Flint.*) Production of Buicks was begun at Flint in 1902, but the Buick Manufacturing Company failed to make a profit, and Durant was called in. He reorganized the company in 1904, placed himself in command, and boosted the capitalization to \$1,500,000. In 1907, the Buick Company marketed a new four-cylinder model and soon rose to a leading place in the industry. The ambitious Durant promptly formed a greater organization, the General Motors Company, incorporated in September 1908 with a capitalization of \$12,500,000.

The Oakland Motor Car Company (*see Pontiac, Tour 5a*) was one of the first of more than 20 automobile and accessory companies purchased by General Motors in its first two years of operation. The company was hailed in 1909 as the 'lustiest industrial infant ever born in America.' In *The Turning Wheel*, Arthur Pound comments: 'General Motors swallowed so many companies in its first two years that acute indigestion followed as a matter of course . . . Mr. Durant bought certain companies . . . simply because they were believed to have basic patents or features which might be important later.'

With four dependable plants—Buick, Cadillac, Oakland, and Olds—Durant had no difficulty selling stock, until financial difficulties hit his organization in 1910. Buick slowed up on production; Cadillac was endangered, until two Detroit banks loaned \$500,000 a few hours before a pay roll came due; and other obligations mounted. Durant could not raise the money to pull the company through; he learned that bankers were reluctant to help because of his 'dashing methods and hairbreadth adventures.' He consequently agreed to a trusteeship in September 1910. A year later he retired from a minor post as chairman of the finance committee to organize a private enterprise, the Chevrolet Motor Company.

At the time Durant lost control of General Motors, he had been financing the experiments of Louis Chevrolet in four- and six-cylinder motors. When these experiments were completed in November 1911, Durant stepped in and organized the new company. At first, both Chevrolet and Little automobiles were produced, but in 1914 the Little was discontinued, and all Durant's energy was concentrated on the development of the Chevrolet. In 1915, the Chevrolet Motor Company, grown to a huge concern with a capitalization of \$80,000,000, literally swallowed the \$12,500,000 General Motors Company. Durant entered a General Motors stockholders' meeting on September 16, 1915, and politely explained to the bankers who had previously ousted him that he now controlled a majority of General Motors common stock through his own and the Chevrolet Motor Company's holdings.

Under Durant's management, General Motors made rapid headway. In 1918, the company purchased a 60 per cent interest in Fisher body,

which had been founded in 1908. According to the terms, General Motors obtained first call on the output of the body plants, but the management remained in the hands of the Fisher brothers, who were free to sell to others also. In 1919, Durant started construction of the \$20,000,000 General Motors Building, first of the buildings of the New Center Group; but, when the market sagged in 1920, he lost a personal fortune of \$90,000,000 and control of General Motors. A group of bankers, headed by J. P. Morgan, took over the company with a loan of \$80,000,000, and Pierre S. du Pont became president. Durant subsequently began manufacturing Durant cars in Flint. When this venture failed in 1924, he retired from the automotive industry.

The scope of the General Motors Corporation has been continually broadened since its reorganization under Pierre S. du Pont. In addition to its car divisions—Buick, Cadillac, Chevrolet, La Salle, Oldsmobile, and Pontiac—the corporation has numerous parts and accessory divisions, at least one of which, the Fisher Body Division, is itself one of the largest businesses in America. The total assets of the corporation on December 31, 1939, were \$1,706,940,197.32, with the average number of employees during the year 220,434. In 1939, they sold 1,727,086 units for net sales of \$1,376,828,337.

49. The GENERAL MOTORS BUILDING, on the SE. corner of W. Grand and Second Blvds., a 15-story structure faced with limestone, is one of the largest office buildings in the country. It, the near-by Fisher Building, and the New Center Building were designed by Albert Kahn. Automobile sales and other large rooms occupy the ground floor, above which rise four well-lighted wings on both sides of a large transverse corridor. The general style is Italian Renaissance; a Corinthian colonnade adorns the two topmost stories.

50. In the rear, at 485 Milwaukee Ave., and connected by tunnel and electric tram with the General Motors office building, is the 11-story RESEARCH LABORATORY, which houses the research division of the corporation.

51. The FISHER BUILDING, on the NW. corner of W. Grand and Second Blvds., designed by Albert Kahn, Inc., and completed in 1928, is distinguished by a lavish use of costly materials, which include 420 tons of bronze for the decoration and metal trim. With strong vertical lines and of restrained modern design, the structure is faced with Beaver Dam marble above a three-story base of polished Minnesota granite. The green roof of the 28-story tower, with dormers and accents of gold, the broken surfaces with belfry-like openings, and the gargoyle-like projections near the top produce a picturesque medieval effect. The vigorous decorative sculpture about the main entrance is by Professor Géza Mároti of Budapest, to whose credit are also the brilliant color decorations of the high arcades, which skirt the three stories of shops. Above the latter are offices; on the twenty-eighth floor is radio station WJR (*reception room open 9 A.M. to midnight*). Opening from the main corridor is the Fisher Theatre, ornately decorated in the

Mayan style. The eleventh-story garage on Lothrop Avenue connects with each office floor of the Fisher Building.

52. The NEW CENTER BUILDING, 7430 Second Blvd., erected for the Fisher brothers in 1931, is a less elaborate version of the Fisher Building. It contains store space on the ground floor and offices above.

OTHER POINTS OF INTEREST

53. The U. S. MARINE HOSPITAL (*open 1:30-3 Tues., Thurs., Sat., and Sun.*), foot of Alter Road, was completed in 1929 at a cost of \$1,360,000. It is primarily maintained for all sailors on American vessels, but hospitalization is extended also to war veterans, coast guardsmen, lighthouse and U. S. Bureau of Fisheries employees, immigrants, Government people on compensation, CCC enrollees, and beneficiaries of the Unemployment Compensation Commission. Constructed of reinforced concrete and yellow pressed brick, the central building is three stories high, with two V-shaped wings. Smaller two-story buildings on the seven-acre tract provide quarters for officers, nurses, and attendants.

54. A short distance southeast of the U. S. Marine Hospital is the U. S. WINDMILL POINTE LIGHTHOUSE (*open by permission*), erected in 1933, which guides channel traffic through the Lake St. Clair outlet. Built on an octagonal concrete base, the steel tower is cylindrical in shape and 42 feet in height. The 12,000-candlepower light emits three flashes of one-second duration every 10 seconds, which can be seen at a distance of 15 miles. No constant attention is required.

55. The HUDSON MOTOR CAR PLANT (*open 9:15-12, 1-2 Mon.-Fri.*), 12601 E. Jefferson Ave., fourth-largest producer of automobiles in America, owns several factories within the city limits. This 116-acre site, which is the main plant, produces chassis and machined parts and has facilities for final assembling and body trimming. Other units include the axle plant, the spare-parts warehouse and shipping station, and the plant in which bodies and other sheet metal parts are fabricated, assembled, and painted.

Since its establishment in 1909, the company has built Hudson, Essex, and Terraplane passenger cars, and Hudson, Terraplane, and Dover business cars. All three models now built by the company are named Hudson, including the 112, a six-cylinder model introduced in 1938, the Hudson Six, and the Hudson Eight. The company had assets totaling \$31,525,212 on December 31, 1938, and net sales for the same year amounted to \$38,845,239. In 1939, the plant in Detroit employed 12,500 men.

56. The PARKSIDE HOUSING PROJECT, bounded by Warren, Conners, Frankfort, and Gray Aves., was constructed by the Federal Government on 31 acres of vacant land near the east-side factory district. Completed in 1938, the project has 59 buildings of brick-veneer and frame construction, containing 775 dwelling units with rear courts and a central mall. The project's cost of \$4,200,000, financed through

the housing division of the Public Works Administration, includes, in addition to land and buildings, such facilities as streets, sidewalks, sewers, public lighting, and gas and water distribution systems. A 19-acre addition to the Parkside project, when completed, will add 355 dwelling units at an estimated cost of \$2,059,000.

57. The CHRYSLER PLANT of the Chrysler Corporation (*tours 9-1:30 Mon.-Fri.*), 12200 E. Jefferson Ave., formerly the Chalmers Automobile Factory of the Maxwell-Chalmers Motors Company, now produces Chrysler passenger cars, Chrysler marine engines, and De Soto engines. In acquiring the plant, the Chrysler Corporation added an entire new car-assembly building to the former structure, built two-thirds of the present engine-machining building, rebuilt the old foundry into a structure to house export operations, a hospital, and the employment division, and converted most of the original plant into a building for body storage and other purposes. Continuous expansion has increased the available floor space to almost 2,000,000 square feet; various land additions have enlarged the plant area to 47 acres.

The CHRYSLER DISPLAY BUILDING, a two-story building designed by Albert Kahn, was erected in 1934 to house the offices and display rooms of the Chrysler Sales Corporation. Of reinforced concrete and steel, with metal-sash, plate-glass display windows, the structure is faced with pale buff stone. At the ends of the central section are two circular towers, crowned by bands of glass blocks that are lighted at night from within. Entrances in each tower lead to circular lobbies and the immense display room; the second floor is occupied by offices.

58. The KERCHEVAL PLANT of the Chrysler Corporation (*see Chrysler Plant for tours*), 12265 E. Jefferson Ave., across the street from the Chrysler factory, is a body plant purchased from the American Body Corporation in 1925 and now used for the manufacture of Chrysler, De Soto, and Plymouth bodies. The various buildings on the 23-acre plot contain about 900,000 square feet of floor space. Between 1,100 and 1,200 steel bodies are produced here daily, when the plant is in full operation.

59. WATERWORKS PARK, E. Jefferson Ave. and Cadillac Blvd., contains the main pumping station, coal docks, and filtration plant of the municipal water system. Originally a 61-acre tract when acquired by the city in 1876, additional purchases have expanded the park to 112 acres. Marking the main Jefferson Avenue entrance is the ornate HURLBUT MEMORIAL GATE, designed by Gustave Mueller and erected in memory of Chauncy Hurlbut, donor of a \$200,000 fund to beautify the park and to maintain the HURLBUT LIBRARY (*open 1-9 daily except Wed.*), a branch of the Detroit Public Library. The red-brick, roughly circular building, erected as a storehouse for oil tanks in 1892, was converted to library use in 1897. It contains 6,000 volumes of the public library collection and the personal library of Mr. Hurlbut, chiefly scientific and political, which was received as a bequest when the donor died in 1885. Beautifully landscaped and equipped with benches and winding walks, Waterworks Park is a favorite summer playground for

children. Near the entrance is a wading pool, used as a skating rink in winter, and at various places on the grounds are tennis courts, flower beds, and drinking fountains. The DETROIT FILTRATION PLANT (*open 9-4 daily*), near the center of the park, supplies water to nearly 2,000,000 persons in an area of 180 square miles. The plant, with a maximum filtering capacity of 500,000,000 gallons daily, is the largest of its kind in the world. Water is piped to the plant through two tunnels, from an intake lagoon in the Detroit River at the head of Belle Isle. The WATERWORKS TOWER, an ornate brick and sandstone structure 185 feet high, was built in 1876 to relieve extra pressure on the waterworks system. It contains a 135-foot standpipe, which is no longer used.

60. The PEWABIC POTTERY (*open 8-5 Mon.-Fri.; 8-12 Sat.*), 10125 E. Jefferson Ave., a two-story half-timbered building, is the workshop of Mary Chase Stratton, a ceramic artist who has achieved international recognition for her distinctive work in glazes, decorative pottery, mosaics, and tiles (*see Artists and Craftsmen*). Examples of her work are in the Detroit Institute of Arts, St. Paul's Cathedral, the Public Library, and in many buildings elsewhere, notably in the Shrine of the Immaculate Conception, Washington, D. C.

61. The NAVAL ARMORY (*open by permission*), 7600 E. Jefferson Ave., a low-roofed four-story limestone structure of severe lines, designed by Stratton and Hyde, was completed in 1930 at a cost of \$350,000. Lack of ornamental detail is not noticeable, although the only decorations used are five seals—those of the State of Michigan and four branches of the military service—on the north elevation, and a carved stone inscription crowning the central two-story portion of the drill hall entrance. On the west side of the building, integrated with the wall, a large bronze relief by Samuel Cashwan commemorates Edwin Denby, secretary of the navy under President Harding.

The Naval Militia was organized in Michigan in 1894. During the Spanish-American War, the Michigan reserves manned the U.S.S. *Yosemite*, and at the outbreak of the first World War they were the first troops to leave Michigan. The armory has a permanent force of 3 officers and 15 men, and a drill force of 25 officers and 400 men. On the main drill floor is a drill ship, 135 feet long and 15 feet wide, now under construction. Designed by Lieutenant Commander O. W. Howard and Lieutenant C. G. Hine, the drill ship is the only one of its kind in the country.

Several sections of the armory are decorated with carvings and paintings by artists of the WPA Art Project. In the lobby of the officers' entrance are bas reliefs in the incised Egyptian manner, by Gustave Hildebrand; the 800 feet of wall surface, illuminated by concealed lights, depicts sailors at work. The stairway door of the officers' lounge is carved in an underwater motif by Hildebrand. In a recess of the hallway is a three-sided bench of oak, with carved panels depicting an engineroom scene on the last voyage of the *Vantic*, also by Hildebrand. On the north wall of the third-floor officers' lounge is *Sailors*, a mural

in fresco by David Fredenthal, which fancifully depicts sailors at work in rough weather. In the lazaret is another Fredenthal mural in the same medium, entitled *Sailors at Play*. The four walls of the dining room, adjoining the lounge, are adorned with murals by Edgar Yaeger, which portray training ships, past and present, used on the Great Lakes by the Naval Reserves.

Docked in the Detroit River behind the armory is the U.S.S. *Dubuque*, a gunboat built in 1904 for South American waters and assigned to Detroit in 1922 as one of the Great Lakes training ships.

62. The DETROIT-MICHIGAN STOVE PLANT (*open by permission Mon.-Fri.*), 6900 E. Jefferson Ave., is easily identified by the company's symbol, a 15-ton stove, which was built by the Michigan Stove Company for exhibition at the World's Columbian Exposition in Chicago in 1893. The plant originated when Jeremiah Dwyer, a journeyman molder, and his brother James opened a small gray-iron casting foundry on the banks of the Detroit River in 1864. In addition to making castings they began assembling cast-iron cookstoves, producing one a day. The present company, formed by a merger of the Detroit Stove Works and the Michigan Stove Company in 1925, is believed to operate one of the two largest stove and furnace factories in the world (*see Holland*). The plant includes 26 mill-constructed brick buildings, with 700,000 square feet of floor space, on a 13-acre site; 1,200 employees produce approximately 75,000 units yearly. Operations include the handling of enamel pieces, baked at 1,800° Fahrenheit in a gas-heated chamber so huge and so well insulated that three weeks are required to cool it.

63. The UNITED STATES RUBBER COMPANY PLANT (*tours at 1:30 Mon.-Fri.*), 6600 E. Jefferson Ave., occupies nine large modern brick-and-concrete buildings on a tract that extends more than 1,000 feet from Jefferson Avenue to the banks of the Detroit River. Since completion of the first structure in 1905, the factory has been enlarged many times; 2,550,000 square feet of floor space are used at present by the tire-producing units. The plant has been in constant production 24 hours a day since it was opened. Now the largest tire manufactory in the country outside of Akron, Ohio, it employs 6,600 workers.

The United States Rubber Company was formed in March 1892, through the merger of 15 of the country's leading rubber companies. Later other groups of plants were acquired. Today the firm operates 30 plants and controls the world's largest rubber plantation under single ownership; 99,000 acres of trees in Sumatra and Malaya produce more than 50,000,000 pounds of rubber each year, which is an approximate third of the rubber used by this one factory.

After the crude rubber reaches the factory, it is broken down by pressure to a plastic mass, into which oils, minerals, and chemicals—chiefly sulphur—are mixed. Altogether 76 materials brought from far parts of the world are employed. Cord is used in making the tire body, or carcass, which consists of alternate plies of rubber and cord. The weftless fabric is then bound together with live rubber and insulating

rubber compounds, after which it is cut into diagonal strips on bias cutting machines. These strips form the plies of the tires. The actual building of the tires, explained by company guides, begins when the flat bands are shaped by vacuum into the more familiar tire shape. They are then placed in steel molds, engraved with the tread design, and lowered into deep steel tanks to be vulcanized under heat and pressure. When removed from the molds the tires undergo 22 separate inspections.

64. In the MT. ELLIOTT CEMETERY, entered from Mt. Elliott Ave. between St. Paul and Kercheval Aves., is the COLONEL HAMTRAMCK MONUMENT, a simple granite slab that marks the final resting place of Colonel John Francis Hamtramck. Colonel Hamtramck was born in Quebec on August 16, 1756, and named Jean François by his French mother. When the American colonies revolted, he enlisted in New York, under the name of John Francis Hamtramck and rose steadily from the ranks to the colonelcy of the First United States Infantry Regiment. He built the first fort at Fort Wayne, Indiana, named in honor of his general, and merited further distinction for his services as commander at Detroit. He died in Detroit on April 11, 1803, and was buried in the churchyard of Ste. Anne's. After a fire in 1805, his remains were transferred to the new Ste. Anne's Cemetery, where they rested until removed to the present site. The worn marble slab, his first monument, was restored by action of the Catholic Study Club members in 1928. An epitaph written by officers under his command is chiseled in the granite slab.

65. The PARKE-DAVIS LABORATORIES (*open 8:15-4:30 Mon.-Fri.; 8:15-12 Sat.*), 1 McDougall Ave. at the Detroit River, are operated by the world's largest manufacturer of pharmaceutical and biological products. The main laboratories, in Detroit, cover an area of six city blocks. The company also maintains manufacturing branches throughout the world, and its products have carried Detroit's name as far afield as have automobiles.

In 1862, Dr. Samuel P. Duffield, a physician and pharmacist, began to manufacture medicinal formulas in a little building at Cass and Henry Streets—the first venture of its kind to be started west of Buffalo. After four difficult years, Dr. Duffield brought Hervey C. Parke into the business. A year later, George S. Davis, formerly connected with the wholesale drug trade, joined the firm as its traveling representative. Dr. Duffield retired in 1871, and the name of the concern was changed to Parke, Davis & Company. In 1874, Parke and Davis built a two-story laboratory on the banks of the Detroit River, the site of the present plant, and the following year the business was incorporated with a paid-in capital of \$81,950. Both Parke and Davis believed that if the concern was ever to earn a leading position, it must give the medical profession something it badly needed and could not otherwise obtain. In those days, pharmaceutical progress meant largely the discovering of new vegetable drugs. Hence, Parke and Davis pored over maps, interviewed explorers, and outfitted expeditions to far-off

places. They carried on energetic investigations of the medicinal flora of Mexico, the West Indies, the Central and South Americas, and even dispatched an expedition to the Fiji Islands. These explorations gave the medical world such valuable drugs as cascara sagrada, cocillana, yerba santa, eucalyptus, coca, Viburnum prunifolium, and saw palmetto.

Parke-Davis made constant advances in manufacturing technique. In 1879 came one of their greatest contributions to pharmacy and medicine, the introduction of standardized pharmaceutical manufacture, which, for the first time in the history of their profession, enabled physicians to obtain medicinal products carefully adjusted to definite strengths. This major advance in medical science paved the way for the official adoption of the principle of uniformity. Physiological standardization of drugs that could not be so assayed by chemical methods was introduced in 1897.

Parke-Davis hold U. S. License No. 1 for the manufacture of biological products. Among the valuable products that this company was first to market were desiccated thyroid glands (1893) and diphtheria antitoxin (1894). In 1900, Parke-Davis announced the discovery of adrenalin, the first hormone isolated in chemically pure form. This was followed in 1909 by pituitrin, a highly purified extract of the pituitary gland, widely used in childbirth. In 1908, a 750-acre biological farm, 'Parkedale,' was established at Rochester, Michigan, 28 miles from the Detroit Laboratories (*see Tour 10*).

The research division of Parke-Davis is divided into many divisions, among which are the departments of bacteriology, pathology, psychology, etiology, parasitology, pharmacology, organic and chemical synthesis, and biological, nutritional, and pharmaceutical chemistry. In the early 1930's alone, Parke-Davis's new products included a specific in treatment of pernicious anemia; two important drugs in treatment of syphilis; preparations introducing theelin, the first female sex hormone isolated in pure crystalline form; a sex-stimulating hormone; the growth-stimulating hormone from the pituitary gland; a solution of the active principle of the adrenal cortex; a solution of the active principle of the parathyroid glands; an antitoxin representing a marked advance in treatment of meningococcus meningitis; and haliver oil, the first of the high-potency vitamin preparations that have revolutionized vitamin treatment.

66. SS. PETER AND PAUL'S CHURCH (Roman Catholic), E. Jefferson Ave. and St. Antoine St., a large brick building painted gray, is the oldest church structure in the city. For many years after its dedication in 1844 it was the diocesan cathedral. The broad three-aisled and arcaded interior has plaster barrel vaults; in the apse is a high Carrara marble altar of ornate Renaissance design. The altar's marble niche holds sculptured groups, *Christ on the Cross* and *The Three Virgins*, by Joseph Gibbel of New York. The altar proper was designed by the Detroit architect, Gustave Adolph Mueller. The church, a post-classical Roman Basilica, was designed by Francis Letourno.

67. The FORT STREET PRESBYTERIAN CHURCH, W. Fort and Third Sts., built in 1855, has walls of rubble limestone, with pinnacles, molded arches and jambs, and other trim of cut stone. Various periods of English Gothic were drawn upon by the architects, A. and O. Jordan, for the design. Especially noteworthy is the slender, octagonal wooden spire, rising from the stone tower to a height of 230 feet. The façade is enriched with tracery and, at the northeast end of the heavily loaded gable, by a beautiful octagonal turret that resembles those of King's College Chapel, Cambridge. Massive trusses support the roof. The gallery, designed by Mortimer L. Smith, and the black walnut pews and pulpit date from 1870, when extensive improvements were made.

Several times between 1876 and 1914 the structure was damaged by fire; it was dedicated for the fourth time in 1915. Adjoining the church on Fort Street is the Church House, in the design of which the Gothic lines of the church were followed by John Scott and Company, architects.

68. The DETROIT NEWS BUILDING (*tours, 1 and 3 P.M., Mon.-Fri., 11-1 Sat.*), 615 W. Lafayette Blvd., a four-story structure of modern design, houses the *Detroit News*, founded in 1873 by James E. Scripps. Windows framed by massive arches, in a long row, reveal the presses, the most characteristic mechanical element of the plant. The reinforced construction is clothed in vigorous masonry forms enhanced by significant sculpture, uncommon in newspaper buildings. Designed by Albert Kahn and Ernest Wilby, some of the exterior details and the spirit of much of the interior show sustained influence of the Renaissance style. Ornamental detail in the exterior treatment reflects the printing world. On the spandrels between the second- and third-floor windows are carved the colophons, or printers' marks, which identified such early craftsmen as Albrecht Dürer, Richard Grafton, Hugh Singleton, and a member of the Aldus family. Carved statues representing four pioneers in printing, Johannes Guttenberg, Christophe Plantin, William Caxton, and Benjamin Franklin, adorn the heads of four piers in the Lafayette Boulevard façade.

The DETROIT NEWS RADIO STATION WWJ (*open by permission*), 630 W. Lafayette Blvd., a sleek limestone structure with black artificial granite skirting the façade, is across the street from the newspaper plant. The figures at the entrance representing broadcasting musicians and listeners were carved from models prepared by Carl Milles. The five studios, variable in size and function, are mounted on felt cushions to shield the microphones from external noises and vibrations. WWJ, the world's oldest commercial broadcasting station, has been on the air since August 20, 1920. On the outer rim of the city, at Eight Mile and Meyers Roads, is the 400-foot WWJ transmitter.

69. The AMBASSADOR BRIDGE (*50¢ one way, car and driver; 5¢ each additional passenger over 12 years old*), Porter and Twenty-second Sts., opened in 1929 at a cost of \$16,821,000, is almost two miles long and, at its highest point, 152 feet above the water. There are five traffic lanes and an eight-foot sidewalk for pedestrians. The two cables

from which the bridge is suspended are made of 37 strands of steel wire, each strand having 216 wires about the size of a lead pencil. Cables are supported on towers of three hollow sections resting on bedrock and tied to massive anchorages, 22½ by 100 feet in dimension. Daily traffic across the bridge—one of the three Detroit-Canada links for auto traffic—averaged 2,346 cars during 1939.

70. FORT WAYNE (*open 9-5 weekdays, 1-5 Sun.; guides furnished*), at the foot of Livernois Ave., named for General Anthony Wayne (1745-96), was authorized by an act of Congress in 1841 and completed ten years later. Built on a bluff overlooking a bend in the Detroit River, the fort is garrisoned by the Second United States Infantry Regiment. Michigan troops were mobilized here during the Civil War; the fort was heavily garrisoned during the first World War. At no time in history, however, has Fort Wayne been attacked by enemy troops. It was constructed as a square, bastioned fortress with a moat and earth embankments, under the supervision of Lieutenant M. C. Meigs, who is credited with designing the fine original barracks. In time, the fort's massive brick-faced walls and the old stone barracks, vacated some years ago, were allowed to fall into disrepair. The walls are being restored by a WPA project, and another project is already planned to rebuild the walls of the barracks.

Among the features of interest are brick vaulted tunnels, leading to emplacements and to loopholes for gunfire, which were skilfully built and are well preserved. The 65 buildings on the 65-acre tract include a modern barracks housing 693 men, an administration center, and a hospital. Under a \$3,000,000 WPA project started in 1937, much-needed improvements have been made. The fort embankments have been restored and many buildings repaired and painted. The officers' houses, formerly frame structures of indifferent design, have been brick veneered and rebuilt along Colonial lines. Roads have been improved, and some new buildings, including a gymnasium, have been erected.

71. STE. ANNE'S SHRINE, Howard and Nineteenth Sts., a red brick building of Gothic design, houses one of the city's oldest congregations. The first building erected by Cadillac and his party was Ste. Anne's Church, a log structure dedicated on July 26, 1701. It burned in 1703. Since then there have been seven structures of that name. When Detroit was destroyed by fire in 1805, the side altars and the pulpit of Ste. Anne's were saved, and these were built into a structure dedicated in 1828, the last Ste. Anne's Church in the old section, at East Larned and Bates Streets. When, in 1886, the present edifice was erected, stone from the East Larned Street church was used in the base, and the old bell was hung in one of the twin spires; the center portion of the communion rail is also from the old church. The body of Father Gabriel Richard, one of the most distinguished citizens in Detroit history (*see Social Institutions*), lies in a crypt beneath the marble and onyx altar. STE. ANNE'S CHAPEL (*open by permission*), reached through the sacristy, contains relics from the church built in

1828 by Father Richard, including the altar, candelabra, and other furnishings.

72. BRIGGS STADIUM, Michigan and Trumbull Aves., a mammoth three-decked steel and concrete enclosure, is the home of the Detroit Tigers, one of the first baseball teams enfranchised by the American League when it was organized in 1900. The team won pennants in 1907-8-9, 1934, and 1940, and won the world's championship in 1935. The stadium has a seating capacity of 60,000.

73. The CADILLAC PLANT (*open 8-4:30 Mon.-Fri.*), Michigan and Clark Aves., produces the most luxurious of General Motors' passenger cars. Originally located in another part of Detroit, the factory was moved in 1921 to its present 60-acre site, where are now 17 buildings with approximately 3,000,000 square feet of floor space. Five series are manufactured: an 8-cylinder La Salle, a 16-cylinder Cadillac, and three 8-cylinder Cadillacs of varying size and horsepower.

Parts manufacturers, some owned by General Motors, supply several major parts to Cadillac specifications, but production of a traditional V-type automobile engine is entirely a company operation. The Fleetwood Division of General Motors (*not open*), Fort St. and West End Ave., supplies bodies for the V-16 and the largest Cadillac V-8. Bodies for other models come from the Fisher Body Division (*see Pontiac, Tour 5a, and Flint*). Normal production runs between 30 and 40 units an hour. In 1937, the plant produced 14,153 Cadillacs and 32,000 La Salles. Essentially a Cadillac, the La Salle was introduced in 1927 for a lower-price market. Like the Cadillac, it is named for an illustrious French explorer.

The Cadillac Motor Car Company was organized in 1902 with a capitalization of \$300,000, although its inception dates from 1895 and the Leland and Faulconer Manufacturing Company under Henry M. Leland. Models were being built a month after organization, but steady volume was not reached until March 1903. This date established Cadillac as the oldest continuous auto producer in Detroit. Among noteworthy automotive contributions credited to Cadillac is the first self-starter (1912).

74. The MASONIC TEMPLE (*open 9-4 daily*), 500 Temple Ave., which houses many of Detroit's Masonic organizations, was designed in the Gothic style by George D. Mason & Company, Detroit architects, and completed in 1926. The mass of the 400-foot-long limestone building is in three sections, each serving a definite purpose. The 14-story towerlike Ritual Building forms the west end of the structure; the 6-story middle section, distinguished by nine slender arched openings and twin-domed stair towers, contains a 5,000-seat auditorium, with a drill hall and armory above; adjoining the auditorium on the east is the 11-story Shrine Club Building, containing lounges, recreation room, gymnasium, and dormitory. Effective carved detail, much of it symbolic, is well placed on the exterior. Carved figures in armor, 14 feet high, symbolizing the knights who guard the destinies and traditions of the Masonic Order, occupy eight niches in the turrets of the Ritual

Building; above the main entrance are 7-foot figures representing the three principal characters in the dramatization of the third degree, from models by Parducci. In other parts of the structure, carved decorations employing numerous motifs carry the symbolism still further. Gothic characteristics generally predominate in the interior decorations, although the styles of various classical periods are employed in the lodge rooms.

In addition to housing the quarters reserved for Masonic activities, the building has facilities that make it a social center of Detroit. Among these are a library, three ballrooms, and various dining rooms and banquet halls. The auditorium, with a stage 55 by 110 feet, is used for grand opera and the concerts of the Detroit Symphony Orchestra. The Ford Sunday Evening Hour of symphonic music, known to millions of radio-listeners, is also presented here.

75. The EASTERN MUNICIPAL MARKET (*open weekdays 5:30 A.M. summer; 6:30 A.M. autumn to Jan. 1; 6 A.M. Jan. 1 to summer; closes 12 noon; special market open 12-9 Sat.*), E. Vernor Highway and Russell St., covering more than eight acres, is the largest of three city-owned produce markets. Three large cruciform buildings provide 359 stalls, which, with the paved market space outside, can accommodate 800 farmers' wagons and trucks. It is estimated that 75 per cent of the produce—eggs, fruits, poultry, and vegetables—is sold in wholesale lots to retail grocers and hucksters, 15 per cent direct to consumers, and 10 per cent to wholesale and commission dealers whose stores surround the market. The first hour and a half after the market opens is the rush period for wholesale trade; later, between 9 and 11 o'clock, the retail trade reaches its height; then housewives, drawn from practically every one of Detroit's 50 or more nationalities, crowd around the stalls in chattering, bustling groups.

76. The BREWSTER HOUSING PROJECT, an area of ten blocks bounded by Mack, Wilkins, Beaubien, and Hastings Sts., is one of the two Federal Housing projects in Detroit completed during 1938. Constructed on a 28-acre site formerly occupied by the worst slums in Detroit, the project, which cost \$4,820,000, contains 701 dwelling units for Negroes in the lower middle-income bracket. Planned with open areas and superimposed on the original street pattern, the 39 buildings, though plain structures of reinforced concrete faced with brick, present a pleasing appearance in contrast to neighboring streets flanked with dilapidated houses. The dwelling units have two to five rooms each, for families of two to seven persons. Each unit includes a bath, kitchen, electric stove, refrigerating unit, and steam heat from a central plant. Annual rents range from \$158.40 to \$360. Applicants must be employed occupants of substandard quarters, who have lived in Detroit for more than one year. The minimum family income must be slightly more than four times, but not more than five times, the rent.

An addition of 146 dwelling units has already been built and occupied at a cost of \$640,000, and plans have been made for a still further enlargement of the project. The latest addition, which it is estimated

will cost \$400,000, will contain 92 dwelling units and will be built on land now owned by the Detroit Housing Commission. The design, in which space requirements and economy were stressed, was by the Eastfield Associates, a group of 15 architects supervised by George D. Mason.

77. ORCHESTRA HALL (*open by permission*), 3711 Woodward Ave., a brick and stone structure built in 1919, housed the Detroit Symphony Orchestra until that organization chose new headquarters in the Masonic Temple in 1939. The windows over the marquee at Woodward Avenue entrance are framed by six pilasters and an entablature, Italian Renaissance in style. The building was designed by C. Howard Crane, Detroit architect.

78. The DAVID WHITNEY HOUSE (*open 10-11, 2-3 Wed.*), 4421 Woodward Ave., now occupied by the Wayne County Medical Society, is the largest of the many pretentious mansions that once lined Woodward Avenue between the river and Grand Boulevard. The exterior of the three-story house, with architectural features of Romanesque style, is faced with Colorado granite. It was completed for David Whitney in 1894, from designs by Gordon W. Lloyd. The fine cabinet work and the interior decorations in various styles, as in many other Detroit buildings of that time, were done by the William Wright Company.

79. CONVENTION HALL, 4465 Woodward Ave. and 4484 Cass Ave., is an imitation stone structure, two stories high along the street and one story high in the central section. High round-arched entrances on each avenue are marked by low square towers. Erected in 1925, it contains 175,000 square feet, the largest exhibition space in Detroit. Convention Hall houses many shows and exhibits, including six major annual events (*see Annual Events*), which have an average total attendance of more than 600,000 persons.

80. The BIRTHPLACE OF CHARLES A. LINDBERGH (*private*), 1120 W. Forest Ave., is a three-story brownstone front residence now operated as a rooming house. Colonel Lindbergh was born here on February 4, 1902, the son of Charles A. Lindbergh, United States representative from Minnesota, and Evangeline Lodge Lindbergh, for many years a teacher in Detroit high schools. Lindbergh went to Washington, D. C., in 1907, where he attended Force School; in 1918, he was graduated from high school in Little Falls, Minnesota; he never returned to Detroit as a resident. A bronze tablet on the front porch of the house commemorates his birth here and his heroic airplane flight to Paris in May 1927, for which he was awarded the distinguished flying cross by President Coolidge.

81. The OLYMPIA STADIUM, Grand River Ave. between McGraw and Hooker Aves., is one of the world's largest arenas. A steel and concrete structure of plain exterior, faced with brick, it was designed by C. Howard Crane, Detroit architect, and completed in 1927 at a cost of about \$2,000,000. The height from the arena floor to the underside of the trusses is 90 feet; the main trusses have a clear span of 186 feet; the floor area is 77,393 square feet; and the indoor rink, largest

in the United States, has an ice surface 242 by 110 feet in area. The seating arrangement for hockey games accommodates 11,500 patrons, and for events that permit seats to be placed on the floor (as in boxing shows and conventions) approximately 16,000. Almost every kind of athletic event can be staged; the stadium is also used for conventions, pageants, theatrical spectacles, expositions, religious conferences, and the annual rodeo, held the first week in October.

82. The LINCOLN and LINCOLN-ZEPHYR PLANT (*tours, 9:30 and 2 weekdays; other hours by permission*), West Warren and Livernois Aves., comprises four buildings containing 543,604 square feet of floor space. All Lincoln products are marketed by the Ford Motor Company (*see Dearborn*), which owns the Lincoln Motor Company stock. The plant normally employs about 3,000 men and, during 1938, produced more than 25,000 Lincoln and Lincoln-Zephyr cars.

The Lincoln Motor Car Company was organized in 1917 by Henry M. Leland, automotive engineer, and his son, Wilfred C. Leland. The Lincoln properties were purchased by Henry Ford in 1922 and reorganized as the Lincoln Motor Company. The original Lincoln plant, a four-story limestone and cream brick building at the corner of Warren and Livernois Avenues, now serves as the factory offices. The first addition, made during the first World War for the manufacture of Liberty motors, is of brick construction with a laminated floor (two-inch planks stood on edge). It was designed by George D. Mason, Detroit architect. Building 18, the machine shop, with brick walls and a glass and steel roof, was designed by Albert Kahn, as was Building 4, added when Ford began making Lincoln bodies here. In the development of industrial architecture, Ford, in collaboration with Kahn, has contributed an important evolutionary step. Beginning with the use of reinforced concrete about 1906, industrial buildings have become increasingly utilitarian. Ford was the first to prove the value of the one-story factory. His rejection of multiple-story structures in his Highland Park plant greatly influenced industrial design.

83. The DE SOTO PLANT of the Chrysler Corporation (*tours 10 and 2 Mon.-Fri.*), 6000 Wyoming Ave., the newest automobile assembly plant in the Detroit area, was opened in 1936 on a 40-acre tract that formerly contained an idle La Salle automobile factory acquired by the Chrysler Corporation. The old plant was revamped for the production of De Soto cars, and a new pressed-steel plant was constructed to produce sheet metal stampings for the De Soto and other Chrysler vehicles; the floor area of the plant thus was increased to 652,000 square feet. The factory can produce approximately 500 cars a day. Manufacture of the De Soto car was started by Chrysler in 1928 in the East Jefferson Avenue plant and continued there until the present factory was opened.

84. The HENRY FORD HOSPITAL (*open 2-5 daily*), 2799 W. Grand Blvd., started as a subscription project in 1908, was completed by Henry Ford when the subscription failed to materialize. During the first World War it was turned over to the Government and became

Governmental Hospital No. 36. More than 1,500 men were hospitalized during the influenza epidemic of 1917-18, and disabled veterans were treated here after the war; but the hospital buildings were not completed until 1921. An outstanding contribution of the Ford Hospital research staff is the development of the tannic-acid treatment for burns. A modern training school and home for the more than 300 nurses is on the grounds. Designed by members of the engineering department of the Ford Motor Company (*see Dearborn*), the exterior of the main building employs high piers to frame the windows, a style generally associated with business structures, rather than a pierced-wall treatment.

85. The BURROUGHS ADDING MACHINE COMPANY PLANT (*open by permission*), 6008-75 Second Blvd., occupying two city blocks, includes buildings ranging from two to five stories in height and containing more than 900,000 square feet of floor space. These modern, reinforced-concrete and brick structures afford facilities for manufacturing typewriter ribbons, roll paper, carbon paper, machine stands, typewriters, cash registers, correct-posture chairs, and adding, billing, statistical, and calculating machines.

William Seward Burroughs, inventor of the adding machines, obtained a patent on his first working model in 1888, and in the following year the American Arithmometer Company was organized at St. Louis, Missouri. Burroughs died in 1898. In 1904, the company moved to Detroit and built a small factory on the present site. Special trains brought both the machinery and 253 workers' families here. By arrangement with a committee of the Detroit Board of Commerce, most of the newcomers were comfortably housed by the evening of the day they arrived. The Burroughs Company, incorporated in 1905 to succeed the American Arithmometer Company, has subsidiary factories in Canada and England and employs about 12,000 persons—5,000 of them in Detroit.

86. TEMPLE BETH EL, 8801 Woodward Ave., home of the Jewish Reformed congregation, is a monumental limestone structure of reserved Classical design. A tall octastyle Ionic colonnade shelters three doorways at the head of a broad flight of steps; the large side windows are set between pilasters, which, with the colonnade and inscriptions from Jewish scripture, comprise the chief decoration. Temple Beth El houses Michigan's oldest Jewish congregation, formed September 22, 1850, in the home of Isaac and Sophie Cozens, the first Jews to come to Detroit.

On the walls of the main auditorium are four murals by Myron Barlow (*see Artists and Craftsmen*). The first, expressive of Jewish hospitality, shows Abraham receiving the three strangers. The second portrays the towering figure of a prophet and the smaller figure of a priest, symbolizing the relative roles of these two and emphasizing the belief that Reformed Judaism is a return to the spirit of prophetic Judaism. The third mural, an old man, pointing out to a youth the wonders of the sacred literature, illustrates how the Jewish faith sur-

vived the dark Middle Ages. The fourth, and probably the most frequently discussed of these murals, indicates that the Jew, although he may come poor to these shores, brings with him a wealth of idealism and veneration of freedom; this is depicted by the figure of a youth who stands, Talmud in hand, at the rail of a ship approaching New York harbor, his face lighted with anticipation and hope.

87. The BLESSED SACRAMENT CATHEDRAL (Roman Catholic), Woodward and Belmont Aves., in the French Gothic style, designed by Henry A. Walsh of Cleveland, was designated the Cathedral Church of the newly created Archdiocese of Detroit in 1938. Its walls are partly surfaced with rock-faced random limestone. Other portions, such as the fine central entrance bay with the portal surmounted by a gallery and rose window, the buttresses, parapets, and the high and effective clere-story, are of cut limestone. The towers and the nave façade are incomplete. A graceful spire of lead rises from the junction of the nave and transept. Marble and stone are used in the vaulted interior, which is furnished with carved oak and illuminated by stained-glass windows. The parish house, harmonizing with the cathedral in material and lines, is immediately south.

88. The JAM HANDY STUDIOS (*open by permission*), 2900 E. Grand Blvd., the largest commercial picture organization in the country, produce sound and silent slidefilms and motion pictures for the use of business organizations in sales training, sales conventions, sales meetings, consumer selling, employee relations, and public relations. Approximately 70 motion pictures and 800,000 slidefilms, valued at \$3,000,000, are produced annually. Jam Handy productions apply the engineering point of view to the dissemination of information and ideas. In the sales managers' service, this principle insures that an elaborate advertising and promotion program, planned by a sales staff in a central office, is simultaneously conveyed to distant consumer-salesmen through the use of motion pictures and slidefilms. The most important customer of the organization is the General Motors Corporation.

89. The PACKARD MOTOR CAR PLANT (*open 8-11, 1-3 Mon.-Fri.*), 1580 E. Grand Blvd., occupies a mile-long, 80-acre site extending north and south of Grand Boulevard. With 95 buildings containing nearly 73 acres of floor space, and employing more than 16,000 persons, the Packard Plant is regarded as one of the most complete automobile plants in the industry. The company produces four Packard cars, two eight-cylinder models, a six, and a twelve; the large cars are built in the plants north of the boulevard, and the lighter models are milled and assembled in the buildings to the south.

The first Packard car was built in Warren, Ohio, where J. W. Packard and his brother, W. D. Packard, operated an electric-lamp and supply-manufacturing business. As early as 1893, they designed plans for a 'horseless carriage.' The first car to bear their name, a one-cylinder job including the device now featured as the automatic spark advance, was completed on November 6, 1899. Models on display in New York City attracted the attention of Henry B. Joy and Truman

H. Newberry, two Detroit capitalists. Joy bought a Packard, after seeing one start away easily in pursuit of a passing fire engine, and, becoming acquainted with the Packards, invested \$25,000 in their firm, the Ohio Automobile Company; other wealthy Detroiters offered to incorporate the company at \$500,000. This was accomplished in October 1902, when the Packard Motor Car Company was organized. A plant was built in Detroit, and the company started production in 1904 with Joy as general manager. He became president in 1905, when the Packards withdrew from active participation.

Except for Joy's retirement in 1916, the direction of the company, which is now capitalized at \$50,000,000, has changed but little since its inception. In 1929, Packard produced about 50,000 automobiles, which remained the company's peak of production until the two lines of smaller and lower-priced models were placed on the market, one in 1935 and another in 1936. The total assets of the company at the end of 1938 were \$49,752,710.81. Their 1939 shipments were 76,366, and there were 14,590 employees on December 31 of the same year.

The first factory buildings designed in what is now termed industrial architecture were constructed here for the Packard Motor Car Company in about 1906. Albert Kahn, Detroit architect, was the designer of the first Packard building, erected in 1903. Of so-called mill construction (heavy timbers and brick), it was built in a period when ideas of utilitarian factory design were about to depart from the dark, unsanitary, and dangerous construction typical of the textile factories of the East. The introduction of reinforced concrete in 1906 gave the freedom necessary for fireproof construction, larger column spacing, and wider window areas. Kahn promptly incorporated these advances in his designs for additional Packard buildings. Other Detroit firms followed this style almost immediately, and a few years later the trend toward fewer multiple-storied structures was under way. Packard, however, has continued the use of three- and four-story buildings. Kahn subsequently attained such prominence among industrial architects that his firm has designed 19 per cent of all industrial buildings erected in the United States since 1903.

Among the interesting features of the Packard Plant are 'silent rooms,' in which expert mechanics, trained to detect the slightest noise or variation, listen to transmission and rear axle gears as they run in mesh. Gears that do not mesh properly are discarded; those that pass inspection travel in pairs, until they are incorporated in the finished automobile.

90. The PLYMOUTH PLANT of the Chrysler Corporation (*tours at 10, 12, and 2 Mon.-Fri.*), 6334 Lynch Road, the world's largest automobile factory under one roof, assembles more cars per hour than any other single plant in the industry. The plant, one-half mile long, has 1,118,500 square feet of floor space, all on one level, 18 miles of conveyors and the longest assembly lines in the industry. In addition to assembling automobiles, this plant manufactures parts for Plymouth

cars assembled at branch factories in Evansville, Indiana, and Los Angeles, California.

The Plymouth factory, marking the entry of the Chrysler Corporation into the low-priced field, was opened in January 1929, with a daily capacity of 1,000 units. In 1930 all Chrysler, De Soto, and Dodge dealers, more than 10,000 in all, were granted the Plymouth franchise, a move that assured the car's success by giving it the support of the largest distributors' organization of any single automobile in the world. In 1933, Plymouth sales accounted for 22.8 per cent of all cars sold in the low-priced field. In 1934, six years after the first car was placed on the market, Plymouth completed and sold its millionth car, a record growth for the industry.

91. The DODGE TRUCK PLANT of the Chrysler Corporation (*open by permission*), 21500 Mound Road, completed in 1938, is used to manufacture Dodge commercial vehicles ranging from one-half-ton to three-ton capacity. Designed by Albert Kahn, the plant occupies a 49-acre site and has a total floor space of 693,163 square feet; normal production capacity is 700 trucks a day.

92. The MICHIGAN STATE FAIR GROUNDS (*open Aug.-Sept.; 25¢ adm.*), Woodward and State Fair Aves., a 65-acre tract with 25 buildings, is operated under the direction of the Commissioner of Agriculture and the State Fair Board. The first annual Michigan State Fair was held in September 1849, at Woodward Avenue and Adelaide Street. The present site, used for the fair since 1904, was donated to Michigan in 1921. In recent years, the attendance at the Michigan State Fair has exceeded that of any other State fair in the country. In 1939, there were 407,683 paid admissions. The grounds facilities are also used to accommodate other events, among them the Shrine Circus, usually held in February.

In the north, along the Woodward Avenue front, is a midway for carnivals and other traveling entertainments. At the southern end is the FAIRVIEW CASINO, a large frame building with wide verandas and many columns, which housed the Michigan State Fair exhibit at the St. Louis World's Fair (1904). Because of its attractiveness, it was returned to the Michigan grounds for permanent use. Near the casino is an orchestral shell, where free concerts are given afternoons and evenings during the fairs. The COLISEUM, a huge steel-trussed structure, is used for dancing, conventions, contests, and special exhibits during the fair, and, as occasion demands, throughout the year.

The ULYSSES S. GRANT HOUSE, First Street near the State Fair Avenue boundary, stood on E. Fort Street in Detroit when Grant, then a lieutenant, occupied it with his bride between April 1849 and May 1850. It was removed to the fair grounds in 1936, when P. W. A. Fitzsimmons purchased the structure, saving it from the wreckers. The plain two-story frame house will be permanently furnished with many of Grant's possessions and other historical material; at present, it is furnished only at fair times.

Adjoining the fair grounds on the east is a one-mile race track (\$1.25

adm.), which the Detroit Racing Association leased in 1933 for 15 years. The track holds a spring meet of 48 days (May-July), usually harness racing during the fair dates, followed by a 19- to 21-day meet of running races in September.

93. PALMER PARK, Woodward Ave., between Merrill Plaisance and Seven Mile Road, is the third largest park in Detroit, exceeded only by Rouge Park and Belle Isle. The original 140-acre tract was donated to Detroit in 1893 by Senator Thomas W. Palmer; in 1920, the city purchased an additional 147 acres at a cost of \$2,367,751. Once part of the donor's farm, the park contains more than 75 varieties of trees and shrubs.

Scattered throughout the tract are 900 picnic tables and benches and 23 concrete stoves. Other recreational facilities include 2 nine-hole golf courses (*25¢ for 9 holes*), 15 tennis courts, 10 shuffle-board courts, and a concrete wading pool. Two small lakes, Lake Francis, in the southern part and Lake Higino in the west-central section, are used for skating in winter. Near the center of the park is a pool equipped with a platform for bait and fly-casting practice, used by the Detroit Bait and Fly-Casting Club. At the head of Third Avenue near Merrill Plaisance is a riding academy (*open 7-7 daily; \$1.25 an hour weekdays, \$1.50 Sundays and holidays*), where horses can be rented for riding on the 12 miles of bridle paths in the park.

Near Lake Francis is the PALMER LOG CABIN (*open 7-7 June 1-Sept. 1; by permission at park pavilion Sept. 1-June 1*), built by Mrs. Palmer as a summer home and guest house. The house originally had four rooms, two upstairs and two down; the planked addition in the rear is of a later date. Built with the key wedge type of corner joints, the cabin contains heirlooms, cooking utensils, furniture, and weapons of the Witherell, Merrill, and Palmer families. Included in the collection is a grandfather clock left by James Witherell in Vermont in 1787, which Senator Palmer, his grandson, brought to Detroit a century later.

In the southern section of the park is the MERRILL FOUNTAIN, a marble memorial to the Palmer family, erected in Campus Martius and later moved to Palmer Park.

94. The UNIVERSITY OF DETROIT, McNichols Road and Livernois Ave., a Roman Catholic institution conducted by the Jesuit order, was opened in downtown Detroit in 1877 and incorporated in 1881 as Detroit College, a liberal arts institution. In 1911, it was reorganized as the University of Detroit. The College of Engineering was added the same year, and the School of Law was established in 1912. The College of Commerce and Finance was begun in 1916 as an evening school; regular day classes were inaugurated in 1922. The School of Dentistry (1932) operates three clinics with 71 chairs at 630 E. Jefferson Ave.

The university has two campuses. The original one on East Jefferson Avenue was occupied until 1927, when the new buildings were completed on a 70-acre plot in the northwestern residential section. De-

signed by Malcomson and Higginbotham, the six structures are uniformly styled in an adaptation of the Spanish Renaissance. Included in the group are the Faculty, Commerce and Finance, Chemistry, Science and Administration, and Engineering Buildings, the Aerodynamical Laboratory, the Memorial Tower, the power plant, and the stadium. The buildings are two and three stories high, of concrete faced with Ohio sandstone; all have red tile roofs except the flat-top Engineering Building.

The LIBRARY (*open 9-5 Mon.-Fri., 9-12 Sat.*), housed in the Engineering Building, has 98,000 volumes with especially extensive collections in literature, history, religion, and law. In the aeronautics section of the same building is a wind tunnel used by many Detroit manufacturers to test stream lines for automobiles and airplanes; the tunnel tests a 6-foot model in an air current of 107 miles per hour. The Memorial Tower, in reality an ornamental smokestack for the power house, was erected in honor of the students and alumni who lost their lives in the first World War. The stadium, of reinforced concrete, seats 18,000 people; six 100-foot towers light the field for night sports.

The downtown campus includes Dinan Hall, Old College Hall, and the St. Catherine Memorial Chapel, utilized by the School of Law, School of Dentistry, and the evening College of Commerce and Finance.

The Very Reverend Charles H. Cloud, S.J., Ph.D., is president of the university, having succeeded the Very Reverend Albert H. Poetker in 1939. The administrative council is composed of prominent Detroit businessmen. The school has an enrollment of 4,000 students.

95. MARYGROVE COLLEGE, 8425 W. McNichols Road, secluded in an 80-acre park in a residential section, is Michigan's oldest Roman Catholic college for women. The enrollment for 1938-9 was 535. The quiet woodland setting, the white stone buildings, impressive in their chaste and simple architecture, and a tall shaft topped by the statue of Mary Immaculate reflect the religious ideals of the college, which is conducted by the sisters, Servants of the Immaculate Heart of Mary. The institution, opened on its present site in 1927, is an outgrowth of St. Mary's Academy at Monroe (*see Tour 9c*), founded by Reverend Louis Florent Gillet in two little log cabins, on November 10, 1845.

The design of the buildings is modified English Gothic and, with the exception of the power house, they are built of Bedford limestone laid in a random ashlar. The four-story Liberal Arts Building, facing McNichols Road, is crowned by four beautiful Gothic turrets. The two front towers, connected by a lacework of ornament, house an illuminated clock and Westminster chimes. This building contains the executive offices, library, chapel, auditorium, museum, classrooms, lecture halls, laboratories, and studios.

Half-hidden among the trees to the west of the Liberal Arts Building is the residence hall, named Madame Cadillac Hall in honor of the wife of Detroit's founder. Madame Cadillac Hall, which represents the Tudor Gothic as found in the English manor, has accommodations for

250 women. The faculty house, the power plant, and the engineer's residence complete the campus buildings.

96. RIVER ROUGE PARK, bounded on the N. by Fullerton Ave., on the S. by Warren Ave., on the W. by Outer Drive, and on the E. by Burt Road, is the city's largest outdoor playground. Roughly rectangular in shape, the park covers 1,204 acres of rolling woodland, threaded from north to south by the winding River Rouge. The tract was purchased by Detroit in 1923 for \$1,400,000 and opened in 1925; since then, the city has carried out a continuous improvement and development program.

Plymouth and Joy Roads traverse the park from east to west, connecting with a series of winding automobile drives and 11 miles of cinder bridle paths. Picnicking facilities are scattered throughout the grounds. On Plymouth Road near the center of the park are a bath-house and three concrete swimming pools (*open May-Sept.*; 15¢ adm. *includes suit, towel, locker, soap*) of Olympic standards, ranging from a foot to 12 feet in depth. North of Plymouth Road is the 18-hole ROUGE PARK GOLF COURSE (50¢ for 18 holes, 75¢ all day). Near the intersection of Plymouth and Burt Roads, in the northeastern section, are 18 tennis courts, and near by is a 40-acre athletic field, with a quarter-mile cinder track, jumping and vaulting pits, two baseball diamonds, and a football field. In the south central area are three children's playgrounds, each of seven acres, with wading pools and playground equipment.

On Joy Road east of the river, in the central section of the park, is the winter-sports area. Here are a 6-acre skating rink and six 700-foot toboggan slides (*free for private toboggans; toboggans rented, \$5 deposit; 50¢ first hour, 10¢ each additional 15 minutes*). East of the winter sports area on Joy Road are the stables of the first Regiment of the Michigan Division of the U. S. National Guard. Near by are hurdles and bridle paths used to train the mounts. Northeast of the stables, in a natural hollow, is the pistol range of the Detroit Police Department, with a mechanical man and other devices to reproduce actual conditions in police work.

In the western section, south of the intersection of Plymouth Road and Outer Drive, is a 130-acre municipal nursery with 21,000 evergreens, 59,000 perennials, 106,000 deciduous trees, and 311,000 shrubs. Plantings from the nursery are used for landscaping city parks and streets.

HAMTRAMCK

HAMTRAMCK (620 alt., 56,268 pop.), a product of the automobile age, ranks as Michigan's seventh largest city. Its 2.09 square miles of territory are within the confines of Detroit. The community consists largely of workmen's dwellings, 55 per cent of which are one-family houses. The principal thoroughfare, Joseph Campau Avenue, narrow and charged with traffic, is lined with two-story shop and office buildings. This single shopping district, strung out the length of the

city, has one of the heaviest volumes of trade in the metropolitan area and, in number of sales, is said to rank next to the loop district of downtown Detroit.

Hamtramck has been content to keep the Detroit system of traffic regulations and street numbering, and it is served by Detroit's public utilities, post office, and hotels. This city within a city has, however, a personality all its own. About 58 per cent of the population is Polish, 24 per cent is native white, and 7 per cent is native Negro. The remaining 11 per cent is drawn from all the countries of Europe and Asia, with the Slavic peoples predominating. Unlike adjoining Highland Park, Hamtramck has definite, organized nationalist groups. And unlike some downriver communities where there are also strong nationalistic strains, the Hamtramck groups maintain many distinctive features without developing isolationist attitudes; they are working steadily toward Americanization and an appreciative utilization of the rights of self-government.

The residents of Hamtramck resolutely withstood annexation, when citizens of neighboring suburban communities voted to dissolve their boundary lines and unite with Detroit. The motives behind Hamtramck's independence are in the main threefold, although it is impossible to analyze all the tenuous influences at work. Of primary importance is the closely organized life of the Polish element; rare is the Polish household in which at least one member does not belong to a political or social club or a fraternal benefit society. Secondly, the Poles have a jealous love of political autonomy; of about 25,000 adults in Hamtramck, more than 19,000 are citizens, and more than 15,000 usually take advantage of their rights of suffrage. The third factor is of economic origin: Commercial and industrial activities (in 1939, there were 34 industrial establishments) contribute more than 70 per cent of the community's income, which, should the city lose its identity, might not benefit Hamtramck directly.

Hamtramck Township was named for Colonel John Francis Hamtramck, a German-French Canadian who rose from the ranks to become General Anthony Wayne's best strategist in the post-Revolutionary Indian wars, and the first American military commander of Detroit. There have been several Hamtramck townships, variously defined but all lying in the Wayne County district. Since 1827, the present area has been contained within Hamtramck Township, although the size of the original unit was reduced by the redefinition of township lines, necessitated by the development of metropolitan Detroit.

In the early 1800's, the French were still farming the river frontage of their 'long tailed patrimonies'—ribbonlike farms that extended inland from the Detroit River—and the township officers bore such names as Campau, Ruard, and Le Paige. Soon, thereafter, came the German immigrants, a noticeably important element by 1857. They increased in number, as the township decreased in size. When Hamtramck was organized as a village in 1901, it was a quiet German-

American farming community, a status it managed to maintain for nearly two decades.

The automobile industry came to the village in 1910, when the Dodge Brothers Company, then manufacturers of auto parts, expanded its holdings and established a large plant here. Other industries followed. When, in 1914, the Dodge brothers began producing automobiles, the Poles, who had lived chiefly south of Hamtramck along Detroit's Chene Street, flocked in by thousands; many of their kinsmen later immigrated from Chicago, Buffalo, and Cleveland. Ford's expansion in Highland Park also influenced Hamtramck's growth, for it was but a short hike across the marshes to the Ford plant. Between 1910 and 1920, Hamtramck's population increased from 3,589 to 45,615, the greatest community growth in the United States in that period. For a time it was the largest village in Michigan, having a population of more than 50,000. In 1922, it was incorporated as a city.

Most of Hamtramck's business places, whether dispensing food, drugs, real estate, or funeral services, bid for attention in Polish as well as in English. A chain drugstore is advertised by a huge *apteka* sign, and on the second floor windows are *adwokat* (attorney) and *dentysta* (dentist). There are some specialty shops, such as those selling feathers and quilts, and many 'bazaars,' their windows a mélange of dream books, pictures of saints, razor strops, chewing tobacco, and first communion dresses. The windows of the white and gleaming *sklad wedlin* (delicatessen) are neatly packed with Polish foods that attract shoppers from all parts of the Detroit district. These stores, as well as the meat shops, display an amazing variety of sausages—big, small, round, loaf-shaped, red, brown, black, ringed, and curled—for which Hamtramck is locally famed.

Hamtramck's Poles, old and young, frequently bedeck themselves in brightly colored native costumes to attend special family affairs or important fraternal, social, and religious meetings. Groups meet regularly to perfect themselves in intricate folk-dance figures. The Hamtramck branch of the Polish Roman Catholic Union is composed of 15 groups, with a membership of more than 2,000. In addition to preserving the Christian faith, increasing brotherliness among Poles, and acquainting the younger generation with the cultural life of the old country, the union maintains political affiliations and supports dramatic clubs, a chief purpose of which is to develop good American citizenship. The Polish Falcons, another large organization, is primarily an athletic and fraternal insurance society.

The typical Polish wedding, a blend of devout religious ceremony and exuberant conviviality, still survives in Hamtramck. Colored bunting and flowing streamers identify the bridal automobile and the festive hall or home. After the church service, the bride and groom eat the traditional dry bread and salt before they cross the threshold of her home. A small house is no obstacle to the festivities, for furniture, except the long tables for food, is stored away, leaving nearly the entire space from attic to basement free for the dancers and musi-

cians. The breakfast begins with a loud clatter of spoons on dishes and the shout, 'gouzko, gouzko' (bitter, bitter), to warn of the impending trials of marriage. This ceases when the bride and groom kiss, to make it *stodko* (sweet). Then come the toasts.

After breakfast, the bridal party goes to the photographer's and then drives about the city, to bring friends and relatives to the evening feast. All who come bring gifts. The shower of donations reaches a climax during the bride's dance, which begins shortly before midnight. In order to save the crockery, the custom of breaking the plate (*see Posen, Tour 11a*) has been changed. The modified ceremony is begun by the chief usher, who throws a bill on a prominently displayed plate, and then swings the bride around the floor, while the waiting partners shout '*Jeszcze nasza*' (she is still ours). Midnight halts the dancing. The mother removes the bridal veil, cuts a portion from the corner, and fastens it to the girl's hair as a matron's cap. Her first duty thereafter is to cut and distribute the wedding cake. The revelry is then resumed, continuing until daylight at least.

The presence of other nationalities in Hamtramck is evidenced by numerous window cards announcing Russian, Ukrainian, and Czechoslovakian meetings, picnics, and dances. St. Mary's Ukrainian Roman Catholic Church (Greek Rite) is the spiritual focus for nearly 1,000 Ukrainian families. Suppers, plays, and civic meetings are held in the parish hall, their social center; and almost every gathering is animated by spontaneous folk dancing.

Hamtramck's sometimes boisterous social and political life stems chiefly from the sturdy Central European peasant strain common to most of the populace. A woman leader of a meat strike, by which exorbitant retail prices were lowered, was elected to the city council in 1936; defeated for reelection, she holds an administrative post (1939). Trade unions, completely organized without violence, are strong in Hamtramck. Before the masses of Polish immigrants had become naturalized, the Negroes, as native-born citizens, considerably influenced Hamtramck politics. A Negro was elected to the city's first common council, and Negroes have been appointed since to various administrative posts, including those of city physician and engineer. They established homes unhindered and have continued to live amicably with their foreign neighbors.

Hamtramck's proudest achievement is in the realm of public education. Its public-school system was developed under the leadership of the late Dr. Maurice R. Keyworth, who came here as superintendent of schools in 1923 (*see Social Institutions*). He found Hamtramck a city of nationalistic Poles, many of whom still saw America as a temporary refuge from the turmoil of Poland. Acting on the theory that 'the purpose of education is to enable individuals to live successfully in a democracy,' he subsequently effected far-reaching changes in the city's social and economic life.

The school system was reorganized to offer a curriculum that emphasized seven basic tenets in Dr. Keyworth's philosophy of educa-

tion. He regarded reading, writing, spelling, language, and arithmetic as the tools with which the pupil must first be equipped, in order to achieve social objectives. Physical and mental development came next, with provisions for body training, correction of physical deformities, instruction in disease prevention, and participation in sports, important for their socializing influence. Ethical training was stressed, to instil a desire for self-improvement and the impulse to serve others. Pupils were led to take part in activities of a civic nature, in order to gain an understanding of good citizenship and to promote patriotic ideals. Vocational study was offered so that occupations could be chosen intelligently and thoroughly studied. The family life of the students was considered, too, and studies of foods, of child care, of interior and exterior decorating, and other essentials, were undertaken. Lastly, courses in drama, music, art, and other cultural subjects were to condition students for a worthy use of leisure.

Known as the Hamtramck Public School Code, the plan was so successfully applied that it has been copied by six American and two Russian universities, as well as by many teachers' colleges; it is also used by countless educators in individual departments of many kinds of schools. Not the least important factor in the code's success was its emphasis upon adult education, which became a regular and surprisingly popular part of the city's school program. Interpreters overcame the language difficulties, and at one time or another a third of the total population has attended evening schools, resulting in a greatly increased number of naturalized citizens. In the night schools, immigrant education accounted for 55 per cent of the registration, commercial education for 27 per cent, and vocational education for 18 per cent. The educational progress of Hamtramck's foreign born has been accompanied by important changes in their economic outlook; no longer content with mere necessities, their standard of living has improved as a result of an enhanced appreciation of scientific and cultural developments.

POINTS OF INTEREST

97. The DODGE PLANT of the Chrysler Corporation (*tours at 9:15, 10:15, and 1:15 Mon.-Fri.*), 7900 Joseph Campau Ave., which manufactures Dodge passenger cars, is the outgrowth of a Detroit machine shop acquired in 1901 by two brothers, John F. and Horace E. Dodge. The Dodge brothers first manufactured stove parts, but soon specialized in making automobile engines and parts for Henry Ford. The plant was moved to the present Hamtramck site in 1910. Three years later the brothers forsook the Ford business, expanded the plant to make cars of their own, and produced the first Dodge automobile on November 14, 1914. Both brothers died in 1920. In 1928 the Dodge properties were acquired by the Chrysler Corporation.

Located on a 58-acre tract and with more than 4,500,000 square feet of floor space available in its 59 buildings, the Dodge plant is

almost a city in itself, equipped with a private telephone system, a fire department, and a hospital. About 1,200 cars are built here during an average working day. Many of the assemblies and sub-assemblies used by other Chrysler Corporation vehicles, such as part of the Plymouth forgings, all transmissions and rear axles, and a large part of the Plymouth stampings and castings, are either made here or at the Dodge Forge plant at 6700 Lynch Road.

98. The TAU BETA COMMUNITY HOUSE (*open by appointment, 9 A.M.—10 P.M. daily*), 3056 Hanley Ave., opened in 1928 as the main unit of the Tau Beta Community Center, is a two-story half-timbered structure designed by Smith, Hinchman and Grylls. The building is headquarters for the many activities of the center, chief of which are classes in music, fine and commercial art, dramatics, folk and modern dancing, homemaking, and general crafts, as well as such departmental services as social and athletic clubs, the operation of a day nursery, a summer camp, a summer play-school, and a social service center. The scope of interests partly indicates the prominent role the center has performed in the Americanization of Hamtramck's large polyglot population.

The main section of the first floor in the community house is an auditorium equipped with a stage and motion-picture apparatus. The second floor contains a model apartment, cooking and sewing rooms, two clubrooms, and a classroom for art and music study. In the basement are a gymnasium, a crafts room for pottery making, and the offices of the Visiting Nurses Association. The community house serves, incidentally, as a teaching center of Wayne University.

When members of the Tau Beta Association became aware, in 1916, of the need for a settlement house in Hamtramck, they stationed a visiting housekeeper and traveling nurse in a five-room flat near the present center. The first house-staff consisted of a nurse and a recreational director. In 1920, a two-story stucco structure was built across the street from the present community house. It served as headquarters for eight years and now houses the day nursery, the library—which in 1924 was taken over by the city and renamed the Hamtramck Public Library—the Council of Social Agencies offices, and classes in woodcraft and auto mechanics. Adjoining the main building is a cottage of complementary design, built in 1923 to house the staff, which now includes 7 full-time paid social workers and 13 part-time paid workers, in addition to 20 Tau Beta members and 12 nonmembers who donate their services.

Most of Tau Beta's activities are supported by the Detroit Community Fund. The summer camp, Hamtramck-Tau Beta Camp, at Columbiaville, Michigan, where children are kept for two-week periods either for a small fee or entirely free, is supported by funds supplied by other Hamtramck service groups, members of the Tau Beta Association, and private citizens. The summer play-school—conducted on the playfield, the community-house roof-garden, and in the house proper—accommodates 100 children between 5 and 10 years of age,

and is maintained by a board member of the Tau Beta Association. The city of Hamtramck pays the deficit in the operation of the day nursery. Although the association began by attending only to the needs of the younger populace, its activities have proved of equal interest to adults. In 1938, the center had a combined attendance of 186,452. 99. ST. FLORIAN'S CHURCH (Roman Catholic), on Florian Ave. between Latham and Brombach Aves., an imposing edifice of red face brick upon a base of Indiana limestone, was designed in the Gothic style by Cram & Ferguson, Boston architects, and completed in 1928 at a cost of nearly \$500,000. The exterior is bold and simple, with excellent detail. The wide nave, with lofty arches at the transepts and tall windows at the sides, has a center aisle leading to the sanctuary, in which high stone-traceried windows rise above a base of colored tiles. The reredos, 50 feet high, is intricately hand-carved with representations of 6 mysteries in the life of Christ. St. Florian's Parish, the oldest and largest in Hamtramck, was organized in 1908.

100. The VISUAL EDUCATION MUSEUM (*open 8:15-4 Mon.-Fri., 8-12 Sat.*), Lumkin Ave. between Edwin and Norwalk Aves., an essential part of the Hamtramck school system, occupies four rooms on the second floor of the Pulaski School, one of the five elementary schools in the system. The museum serves as a training center for teachers and pupils (this duo-training is typical of the Keyworth system), as an exhibit-lending department for all grades, as a center for both temporary exhibits and permanent collections, and as a circuit-center for motion-picture programs that are correlated with each week's work in the system's classrooms.

Dr. Keyworth established the department of visual and auditory education in 1926. He believed that a genuine or illustrated representation of a subject, in preference to a written description, enabled children to learn more rapidly. The use of motion pictures and slides sufficed until 1932, when the museum was added. Many other kinds of visual instruction have since been employed, including posters and field trips and excursions.

Sophie Gurvitch, Frank Gray, Florian Rokita, and Afrem Simon of the Michigan Art Project created the many settings that adorn the walls of the two museum rooms. One room houses a collection of folk art gathered from all parts of the world; another contains stuffed animals and dioramas. Notable among the latter are four that represent the four ages in the evolution of mankind: the Paleolithic (middle stone), the Neolithic (new stone), the bronze, and the iron. Coal-mining operations are illustrated by two dioramas, placed one above the other, showing the mine above and below the surface of the ground. Still another represents a scene in India—a mammoth elephant fighting three tigers—in which the torrid atmosphere of a steam jungle is strikingly conveyed. Michael Gera, acclaimed for his development of depth in this form of art, and George Rees, who painted the realistic backgrounds, were both engaged by the Michigan Art Project for this work.

101. COPERNICUS JUNIOR HIGH SCHOOL (*open 8:15-5:30 Mon.-Fri., 8:15-12 Sat.; escorts upon request*), 11422 Charest Ave., one of the most recent units of the Hamtramck school system, was designed to offer facilities for an efficient application of Dr. Keyworth's educational principles. The structure is faced with brick in several shades of orange, combined with variegated limestone, and decorated with terra cotta ranging from light buff through orange to reddish-purple. From the E-shaped ground-plan, the wings rise two stories, and the central portion three. The school, designed by D. C. Wetzel & Company, was completed in 1931 at a cost of about \$900,000. It accommodates 2,200 high-school students and about 350 elementary pupils.

The building integrates scientific, architectural, and educational planning. All rooms intended for activities that create noise and vibrations are soundproof, and in certain quarters, as in the music rooms, walls and floors are mounted on springs, or absorbers. Individualized education methods have necessitated unique spatial distribution: there is space for filing of lesson sheets, for individual projects, and for storage; discussion rooms are provided for students and for visiting teachers and counselors. A radio room, adjacent to the offices, contains a large library of recorded music for use in music appreciation courses. The radio system permits programs, originating either in outside studios or in the school's auditorium, to be broadcast to all classrooms.

Situated in the south wing of the first floor are vocational classrooms, including a machine shop, an auto shop, a drawing room with provision also for training in photography, and a general shop with equipment for sheet-metal work. There is also a series of rooms for commercial studies. In the south wing of the second floor is a completely furnished apartment, utilized for teaching home care in accord with Dr. Keyworth's theories. Here, too, are laboratories for the preparation of foods and for making and repairing clothing. Music rooms occupy the entire third floor.

Students of the Copernicus Junior High School are allowed to assume responsibility for the direction of classes. Courses are diversified to provide conditions similar to those in everyday life. The main objective is to prepare the student for 'successful living in a world of changing conditions.'

HIGHLAND PARK

HIGHLAND PARK (600 alt., 52,059 pop.), bordering Hamtramck at the southeast, lies six miles northwest of downtown Detroit and is surrounded by that city. Highland Park is the tenth largest city in Michigan. Its area, trapezoid in outline and approximately two miles square, is bounded west by Thompson Avenue, north by McNichols Road, east by the Grand Trunk Railroad right-of-way, and south by Tuxedo and Tennyson Avenues. Woodward Avenue bisects Highland Park, and most of the city's other thoroughfares are continuations

of Detroit streets. The rigid traffic laws that apply in Highland Park are patterned closely after those of Detroit. Almost the only point of divergence between the city and the metropolis is the fact that only beer and light wines are sold in Highland Park's public bars.

Once a residential suburb of Detroit, Highland Park rapidly acquired city status, following Henry Ford's purchase in 1909 of a 160-acre site, at Woodward and Manchester Avenues, and the construction there of the Ford Motor Company plant. Well-built, medium-sized houses, shaded lawns, and quiet streets soon ceased to be the community's distinctive mark. Huge groups of workers descended on Highland Park. An acute housing shortage developed. Beds did 24-hour service; necessities were hawked from pushcarts, for want of store space. Rows of jerry-built houses went up. Racial groups were temporarily disrupted, and Irish, Maltese, Syrians, Mexicans, Japanese, Hungarians, and Scandinavians lived side by side. Since many knew only their native language, a cross-mark was a satisfactory signature on a pay check, and hundreds of workmen were identified merely by numbers.

At the time of Ford's arrival in Highland Park, its population was approximately 425, but within a year it soared to 4,120. Following Ford's announcement of a \$5-minimum daily wage in 1914, the number of residents increased rapidly, reaching 46,499 in 1920. In the latter year, Ford shifted his plant to Dearborn; Highland Park suffered a loss of inhabitants and an abrupt business slump. The slack was taken up later, when Detroit's population spilled over into the smaller city, which thereafter developed as a residential center. The huge plant abandoned by Ford is now partly occupied by several industrial companies, and other factories have been built on the east side; in September 1939 they totaled 19 establishments employing 12,087 workers.

The first known settler on the site of Highland Park was a farmer of English descent, Richard Ford—not related to the Henry Ford family. He built his cabin upon the highland for which the town was eventually named—a ridge, since leveled, that was separated from Detroit by a swamp. The ridge was purchased in 1818 by Judge Augustus B. Woodward, prominent in Detroit's reconstruction after the fire of 1805 (*see History*). He platted a village of 36 city blocks, but the proximity of the swamp militated against settlement, and his plans came to naught, as did those of another Detroit judge, B. F. H. Witherell, who attempted to found a village on the site in 1836.

It was not until 1887 that a promotional scheme finally attracted investors. Captain William H. Stevens, who returned from Colorado with a fortune made in silver mining, was the organizer. It is doubtful if he would have succeeded had not Senator Thomas W. Palmer donated 100 acres of his Log Cabin Farm for a Detroit park. The park site, which lies north of Highland Park, was also low and wet, and sewers were dug to drain it into the Detroit system, thus bringing drainage to the swamp as well. The village of Highland Park was organized in 1889, with a population of about 400. In 1918, it was

incorporated as a city. A commission form of government, with a mayor and four commissioners, elected for two years, was established. Royal Milton Ford, great-grandson of the original settler, was the first mayor.

Most of the foreign-born families that remained in Highland Park after the Ford exodus have been absorbed and largely Americanized through the aid of several Highland Park agencies. Many social problems are handled through community centers at 11800 Oakland Avenue and 45 La Belle Avenue. Thirty-two nationalities are cared for at the latter address; the other center, on the east side, serves mostly Italians and Negroes. Sewing, weaving, dancing, dramatics, gymnastics, and various handicrafts are taught as part of the program. On May 1, the Citizenship Bureau sponsors a Highland Park Festival in which 13 nationalities take part; at Christmas time, the bureau opens a World Market, at which the products of European craftsmen are sold. Women graduates of the bureau's Citizenship School are tendered a Washington-Lincoln Dinner by the Highland Park Woman's Club, the Daughters of the American Revolution, and the Parent-Teachers' Association.

POINTS OF INTEREST

102. The HIGHLAND PARK PLANT of the Chrysler Corporation, 341 Massachusetts Ave., occupies a 67-acre tract that contains buildings with approximately 1,900,000 square feet of floor space. Originally acquired from the Maxwell Motor Corporation, the factory has been changed from a car-manufacturing to a service and parts-manufacturing plant. Numerous new buildings have been erected, including the Administration Building, the Engineering Building, and the Export Buildings. The original Maxwell plant, enlarged by the addition of several multiple-story steel and concrete structures, houses the Chrysler Motor Parts plant.

In the four- and five-story red-brick ADMINISTRATION BUILDING are the general offices of the Chrysler Corporation, second-largest producer in the automotive industry. The corporation is an outgrowth of the Maxwell Company, which was formed to sell the two-cylinder automobile built in 1904 by Jonathan Maxwell and Benjamin Briscoe. In 1913, the Maxwell Company vacated its plants in Tarrytown, New York, and Pawtucket, Rhode Island, and moved to Detroit. In 1917, the Maxwell Company leased part of the East Jefferson Avenue plant of the Chalmers Company, a motor-car concern organized in 1909, and from that time did business under the name of the Maxwell-Chalmers Motors Company. Three years later, when financial difficulties necessitated the reorganization of Maxwell-Chalmers, the man chosen for this job was Walter P. Chrysler, a one-time railroad mechanic.

Chrysler formed a new organization, the Maxwell Motor Corporation, which inherited 26,000 unsold cars, debts of more than \$20,000,000, and a completely disrupted sales-agency organization of about 50 dealers. In three years' time, however, the Maxwell plant was mod-

ernized and the corporation had a cash balance of \$5,000,000, with no debts. In rebuilding the company, Chrysler found the opportunity to create a new car with a high-compression motor, on which he and his associates had been working for several years. In 1924, the first car to bear his name, the Chrysler Six, appeared on the market. In the following year, the Maxwell Motor Corporation was again reorganized to become the Chrysler Corporation. In 1928, the corporation purchased the Dodge plant in Hamtramck. Equipped with these added facilities, the Chrysler Corporation introduced two new cars, the De Soto and Plymouth, and continued to manufacture Chrysler cars and Dodge cars and trucks.

The corporation's present output includes four makes of passenger cars (Plymouth, Dodge, De Soto, and Chrysler), Plymouth commercial cars, Dodge trucks, marine and industrial engines, and air-conditioning and heating equipment. Net sales for 1938 totaled \$413,250,512, and the current assets of the company are listed at \$134,160,494.

The CHRYSLER ENGINEERING BUILDING (*open by appointment*) houses research, experimenting, testing, and development laboratories. Here, the corporation's future vehicles are planned and developed. Consisting of six floors, from a large auditorium on the top floor to testing laboratories and dynamometer rooms on the ground floor, the building houses the executive offices, art department, color divisions, design room, and various engineering units. A new Chrysler model has its beginning in sketches created by the art department. The drawings are embodied in a quarter-sized clay model that can be smoothed and molded as desired. Full-size drawings of this model are prepared, to enable engineers to visualize the new car's proportions. Then a full-size clay model is designed to show every detail of exterior surfaces. A final model of wood—painted and fitted to resemble a real car—is carved to the exact proportions of the clay model. Master drawings for shop production are then made of the wooden model.

The Engineering Building also contains the headquarters of the CHRYSLER INSTITUTE OF ENGINEERING, founded in 1931 to bridge the gap between theory and practice in the engineering and manufacture of motor cars. Under a State charter and by authorization of the Detroit Board of Education, the Chrysler Institute is empowered to grant degrees in engineering as well as certificates and diplomas in the field of secondary education. During the institute's nine years of operation, 150 graduates of the foremost engineering schools in the world have received training here; 2,864 other employees of the Chrysler Corporation have completed undergraduate work in courses adapted to their needs. The enrollment at the beginning of 1940 was 652. The courses, free and exclusively for Chrysler employees, are designed to train engineers for future positions in the corporation. In contrast to the conventional idea of a university, the Chrysler Institute has no regular classrooms; classwork is carried on throughout the various engineering and production departments of the entire corporation.

The CHRYSLER MOTOR PARTS PLANT, which supplies repair parts for all makes of motor vehicles manufactured by the Chrysler Corporation, occupies some of the buildings that once housed the old Maxwell Motor Company. This plant engineers, manufactures, records, stores, and ships more than 150,000 separate repair parts for several millions of automobiles still in use, including not only the four makes of cars manufactured by Chrysler at present, but also the Maxwell and Dodge machines for which the Chrysler Corporation assumed parts responsibility. The parts plant maintains depots in nine cities to serve sectional areas.

103. The MCGREGOR PUBLIC LIBRARY (*open 9-9 weekdays*), 12244 Woodward Ave., is housed in a building of Greco-Roman design. The exterior, largely of limestone, has a series of fluted pilasters and a molded cornice with polychrome terra-cotta frieze. The main entrance is set between Ionic columns. The site was donated by Mrs. Tracy W. McGregor; the building was completed in 1926 at a cost of \$500,000. It was designed by Edward L. Tilton and Alfred M. Githens, in association with Marcus R. Burrows and Frank Eurich, Jr. The latter designed the art-room entrance gates of wrought iron, executed by August Schack of the WPA Art Project (*see Artists and Craftsmen*); Leonard Jungwirth, also associated with the WPA Art Project, carved the group, *Children Skating*, in white oak. The bas reliefs of the bronze entrance doors were modeled by Fred Torrey. Mural paintings by Mildred Williams, over the bookcases in the CHILDREN'S ROOM, portray scenes from *Peter Pan*, *Alice in Wonderland*, and several of the fairy tales. Among exhibits in the art room are watercolors by Frederick W. Henrich, and *The Old Canal*, an oil painting by Francis Peter Paulus (*see Artists and Craftsmen*).

104. The HIGHLAND PARK HIGH SCHOOL (*open by permission*), Glendale Ave., between Second and Third Aves., designed by Wells D. Butterfield, is a two- and three-story Tudor style structure faced with Indiana limestone. The senior-high-school section was completed in 1915 at a cost of \$500,000; the junior-high-school section was added in 1918 at a cost of \$800,000; together, they house about 3,700 pupils. The junior college, in the junior-high-school section, offers two years of college work in literature, engineering, business administration and pre-law, pre-dental, pre-medical, and other pre-professional courses. The average enrollment is about 360.

Highland Park's excellent school system attracts many tuitional students from near-by communities. Tuition is not charged resident pupils, to whom even school supplies are provided without cost. The 'Primary Unit,' first developed here and now known throughout Michigan, is composed of three primary rooms, two small ones for academic studies and a larger one equipped with work tables, tools, musical instruments, and supplies for simple but extensive handwork. This unit system is in effect in the Highland Park's seven grade schools. A psychology service provides intelligence tests for classification purposes and gives specific attention to pupils who are unable to adjust

themselves to normal school groups. A psychiatry staff is maintained for the more serious behavior-problem cases. In the Child Care Department of the senior high school, children between two and five years of age are cared for by senior girl students, who thus obtain practical training in child rearing. The fee for this service is \$10 a month; at present, the department is equipped to handle 20 children. The children are trained in behavior by a psychologist, but are not formally schooled.

105. The HIGHLAND PARK PUBLIC GOLF COURSE (35¢ for 9 holes), 13300 Oakland Ave., extends eastward to the Highland Park city limits. The course, in reality, is divided north and south by Manchester Avenue into two courses.

106. The MOHAMMEDAN MOSQUE (*private*), 242 Victor Ave., America's only mosque when it was built in 1922, was made possible by a prosperous real-estate agent, Mohammed Karoul, who contributed \$50,000 for its construction. The mosque, a one-story structure of stone and cement, contains a small auditorium. Its distinguishing pair of minaret-like steeples were never used, as in the Orient, for the call to prayer. Most Mohammedans in the United States are unmarried men, or men whose families have remained in the Old World; they are few in number, and generally remain for a short time only. The Ford industries, however, attracted a sizable group to Highland Park. When the Ford Plant was moved to Dearborn, where another mosque is under construction (*see Dearborn*), many Mohammedan workers followed and the Highland Park mosque was allowed to fall into disrepair. Reconditioned, it houses the David M. Vincent American Legion Post No. 120.

107. The LAWRENCE INSTITUTE OF TECHNOLOGY (*private*), 15100 Woodward Ave., is housed in the former Ford Trade School Building. The institute was founded in 1932 by Russell E. Lawrence, previously dean of engineering instructors at the University of Detroit, on the principle that 'this institution shall be non-profit, non-sectarian, non-political, and non-partisan, with all races and all creeds welcome.' It was Dean Lawrence's purpose to provide instruction in engineering for those with limited means.

The institute has a co-operative plan that enables students either to attend classes for 12 weeks and work in industry for 12 weeks, or to attend the regular day and evening schools. It grants the degrees of bachelor, master, and doctor of science and includes in its curriculum physics, metallurgy, and aeronautical, architectural, automotive, civil, electrical, industrial, and mechanical engineering. There are approximately 850 students. Russell E. Lawrence died in 1934 and was replaced as president by his brother, E. George Lawrence. George A. Hendrickson was named dean in 1936.

108. The OLD FORD MOTOR COMPANY PLANT (*not open*), Woodward and Manchester Aves., consisting of 23 buildings on an 180-acre site, is still owned by Ford, and about 30 per cent of the space is used by minor divisions of the Ford industries. About 50 per

cent of the buildings' area is rented to various non-Ford enterprises, including a school. The BRIGGS BODY PLANT (*not open*), Manchester Ave. at John R. St., which manufactures bodies for Ford and Lincoln-Zephyr automobiles, occupies a large section of the plant.

POINTS OF INTEREST IN ENVIRONS

Eloise Infirmary and Eloise Hospital, 15 *m* (*see Tour 1*); Wayne County Training School, 25.5 *m.*, Detroit House of Correction, 26 *m* (*see Tour 2a*); Botsford Tavern, 16 *m.*, Ford Republic, 17 *m*, Michigan Children's Hospital, 18 *m.* (*see Tour 4a*); Detroit Zoological Park, 11 *m*, Shrine of the Little Flower, 13.5 *m*, St. Hugo of the Hills, 21 *m* (*see Tour 5a*); Cranbrook Foundation, 20.5 *m* (*see Tour 5A*), Selfridge Field, 19.5 *m.* (*see Tour 9b*); Alger House, 12.5 *m.* (*see Tour 9A*); Grosse Ile, 17 *m.* (*see Tour 9B*).

Flint

Railroad Stations: S. Saginaw and 15th Sts. for Grand Trunk Ry.; Beach and Union Sts. for Pere Marquette Ry.

Bus Stations: N. Saginaw St. and 3rd Ave. for Greyhound, Great Lakes Motor Bus, Indian Trails, Hiawatha Trails, Blue Goose, Flint-Caro-Sebewaing Bus Co., North Star-Hansen, Peoples Rapid Transit, Russel Motor Bus, and Short Way Lines.

Airport: Bishop Airport, Torrey and Bristol Roads, $4\frac{1}{2}$ miles SW. of downtown for Pennsylvania Central Airlines; taxi fare 60¢, time 10 min

Traffic Regulations: Several one-way alleys prominently marked. No left turn on downtown Saginaw St.; no turn against red light. Intersections where right turn is prohibited are marked. Speed limits, indicated by signs, vary from 15 to 40 m.p.h.

Accommodations: 12 hotels, boarding houses, inns, tourist homes and parks.

Information Service: Flint Automobile Club, Industrial Bank Bldg., N. Saginaw St. and 2nd Ave.

Radio Station: WFDF (1310 kc.).

Theaters and Motion Picture Houses: Industrial Mutual Association Auditorium, E. 2nd Ave. near Saginaw St., occasional productions, 15 motion picture houses.

Athletics: Atwood Stadium, 3rd Ave. and Prospect St., IMA Auditorium, E. 2nd Ave. near Saginaw St.

Swimming: Thread Lake Park Pool, foot of Peer Ave., open daily 9-9 June 15-Sept. 1, adm. 10¢ for persons 16 years and over, 10¢ locker fee for children under 16 is refunded upon return of the key; Berston Field House, N. Saginaw St. and Pasadena Ave., and Kearsley Park Pool, Kearsley Park Blvd., have the same arrangements; Haskell Community Pool, W. Hamilton and Forest Hill Ave., open daily 9-9, adm. 5¢ for children, 10¢ for adults.

Golf: Flint Country Club, E. Atherton Road and Lakewood Circle, 18 holes, greens fee, \$1; Mott Park Golf Course, 2401 Nolen Drive, 18 holes, greens fees, 25¢ for 9 holes Mon.-Thurs., 40¢ for 9 holes Fri.-Sun.; Swartz Creek Course, Parkside Drive near Miller Road, 27 holes, greens fees, 25¢ for 9 holes Mon.-Thurs., 40¢ for 9 holes Fri.-Sun.

Riding: Woodcroft Academy, 6208 Branch Road.

Annual Events: American Negro Emancipation Day, Jan. 1, Negro Civic Center, NE. corner Clifford and Keneworthy Sts.; National Negro History Week, first week in March, Negro Civic Center; Puerto Rican Negro Emancipation Day, March 22; May festivals in schools; International Folk Festival, early June, Oak Grove outdoor theater, dances, songs, costumes, and art objects of many nations. Folk Festivals: Syrian, Alhambra Club on Harrison St., in Jan.; Scotch, Robert Burns Club usually celebrates the poet's birthday on or around Jan. 25, no definite place; Serbians, St. John St. at St. John Baptist Lodge, in April; Polish at Polonia Park, Linden and Kelly Roads, in May.

FLINT (780 alt., 156,492 pop.), covering 30 square miles on the Flint River in southeastern Michigan, is the third-largest city in the

State. The downtown section, with modern office buildings and business houses, resembles that of any Middle Western city of similar size. But the similarity ends there. Flint makes automobiles for the Nation. Huge factories—long, squat, and seemingly all windows—sprawl throughout the city. The Buick factory is in the north, the mile-long Chevrolet plants and Fisher Body No. 2 Plant in the west, the AC Spark Plug factories in the east, and Fisher No. 1 Plant in the south. On the outskirts, far removed from the din of pneumatic hammers and car loadings, are the neatly aligned houses of businessmen and motor-company executives.

Automobile manufacture has made Flint a rich city. It has a \$3,000,000 city-owned waterworks and water-softening plant, a modern sewage-disposal plant, a fully equipped municipal airport of 220 acres, a municipal hospital, a public library with more than 213,000 volumes, some 40 public parks covering 1,000 acres and valued at \$2,000,000, and a modern school system. The latter includes 24 grade schools in permanent buildings and 7 in temporary buildings, a continuation school, a school for special education, a junior technical high school, 3 regular junior high schools, 3 combination schools housing both junior-high and elementary students, 2 senior high schools, and a junior college. There are also 5 parochial schools.

The population is composed of heterogeneous racial and national groups, drawn here by the promise of a better life. Through the years, these national groups have developed their own festivals and cultural activities. An annual May festival, commemorating the Polish constitution of 1791, consists of folk songs and dances, speeches and drills, and the singing of the Polish national anthem. Attired in native costumes, the Serbian Society presents a festival with songs, folk dances, and native plays. The Flint Robert Burns Club holds a yearly celebration, presenting Scottish dancing, bagpipe music, and a concert. The Alhambra Club, a Syrian organization, has its own annual festival at its clubrooms in the business district of the city. A cosmopolitan banquet held annually is featured by a roll call of national groups present.

Negroes form the largest racial group; about 7,000, each New Year's Day, celebrate Emancipation Day in the schools and churches and at the Negro Civic Center. Emancipation Day is usually fixed, in each State, by the date of that State's ratification of the liberating amendment, the thirteenth to the Constitution of the United States. It is believed that the day has been celebrated here yearly since Michigan's ratification in 1865, although the date was February 2, not January 1. The first week in March is set aside by Flint Negroes as National Negro History Week, although it is observed elsewhere in the United States early in February. Pamphlets and journals issued by the Washington publisher, Carter G. Woodson, who edits the *Journal of Negro History*, are read in schools, churches, and civic centers. Another Emancipation Day is observed by the Puerto Rican Negroes

of Flint, who on March 22 acknowledge the full governmental representation given to their home island on March 2, 1917.

General Motors, employing 90 per cent of Flint's factory employees, fosters leisure-time activities for its workers. The United Automobile Workers is developing a program for the recreational and cultural needs of its membership. Many of Flint's inhabitants take to the lakes of central and northern Michigan in the summer, swelling the week-end tides of traffic that flow through the city.

The Flint River and adjacent lands were in the early days a favorite rendezvous of the Chippewa and Potawatomi. In 1819, Jacob Smith, a fur trader from Detroit, persuaded these Indian tribes to renounce the British and French and make a treaty with General Lewis Cass, surrendering the lands of Saginaw County, which then included Flint. After this treaty, Smith was the first white man to settle on the site of the present city.

Other settlers arrived, among them John Todd, who came from Pontiac in 1830, established a tavern, and operated a ferry across the river. By 1833, the Federal Government had improved the road to Detroit, in order to connect the fortifications of Detroit with those in Saginaw. In 1837, when Michigan became a State, Flint was a village with a population of 300, and the seat of Genesee County. It had a post office, a banking association, an edge-tool factory, a sawmill, two drygoods stores, two grocery stores, two physicians, a lawyer, and the U. S. land office for the Saginaw district. Lumbering, which followed the fur trade, brought sawmills with it and was responsible for the two-wheeled-cart factories that developed here. In 1855, Flint was incorporated as a city. By the 1890's, patented road-carts were manufactured on a scale that brought Flint international repute. The cart factories subsequently gave way to carriage shops, with a total annual output of 100,000 vehicles. By the end of the nineteenth century, manufacturers of horse-drawn carriages were experimenting with steam and gasoline engines and other devices that later revolutionized transportation.

The birth of the Buick Motor Company in 1904 marked the beginning of automobile manufacture in Flint on an organized scale. Like many other small wagon-producing communities, this city gradually geared its industry to a new and modern tempo. Labor, at first scarce, was imported from adjacent towns, farms, and States. Mechanization and simplification of work resulted in a large influx of unskilled laborers, the majority of whom were Southerners. The number of foreign workers, although large, was not as great as in many industrial cities of comparable size, for Flint's major growth came after immigration restrictions went into effect.

C. W. Nash, one of the pioneers responsible for Flint's rise in the manufacture of autos, is still actively connected with the industry. Another, Walter P. Chrysler, was one of the industry's leaders until his death in 1940. Some, Albert Champion and W. F. Stewart, are names remembered by the older generation only. One name, even though

slightly obscured by the passage of time, is still looked upon as a symbol of the romantic days in the industry—William C. Durant.

Durant, who at the age of 25 was part owner with Josiah Dallas Dort (*see Dearborn*) of 17 vehicle plants, gained control of the Buick interests. In 1908, he organized the General Motor Company—fore-runner of the General Motors Corporation—involving Cadillac, Oakland, and Oldsmobile companies. The next year he bid for, and almost obtained, control of the Ford interests; his inability to get a large loan from bankers, who had previously promised it, stopped the deal. In 1910, Durant lost control of General Motors but, by brilliant maneuvering, regained it five years later, continuing as its president until 1920. Pierre S. du Pont succeeded him. A downtown hotel, a school, and two small blocks outside the city limits are named for Durant, while the name of Du Pont graces an important thoroughfare in the northwest section.

The auto industry experienced acute growing pains in 1937, when Flint was transformed almost overnight from an open-shop town into a union town. The second shift of Fisher Body Plant No. 1 struck Wednesday night, December 30, 1936, and occupied the plant. It was the first large-scale sitdown in Michigan. Fisher Plant No. 2 followed suit. General Motors Corporation refused to negotiate with the strikers' demand for collective bargaining, holding that sitdowns were illegal. The strikers offered to evacuate, pending negotiations, if the corporation would pledge not to attempt operations or remove machinery. This General Motors refused to do; instead, the company obtained a sweeping injunction against occupation of the plants, which the strikers disobeyed by sitting tight. While charges of poor faith rebounded between General Motors and UAWA officials, the strikers consolidated their position. Discipline within the plants was strict. Men were told off for household duties, for manning danger points in case of attack, and for communicating with pickets, lookouts, and union officials on the outside.

On the evening of January 11, 1937, company police interrupted food deliveries to Plant No. 2. Fighting followed. City police joined the battle with tear gas and riot guns and attempted to capture the plant gates, held by strikers. A crowd of 2,000 gathered on the sidelines, while police bombed the plant with tear gas. A sound truck appeared, manned by a youthful organizer who shouted encouragement to the strikers. Unfavorable winds blew the gas away from the plant, and its fog obscured the battle. Police riot guns went into action, while strikers fought with the weapons they had at hand—clubs, nuts and bolts, milk bottles, and heavy streams of water from fire hoses. The 40 or 50 police charging the plant gates were repulsed at every attempt. When the fighting stopped, 16 strikers and 11 officers were treated for injuries and wounds. The next afternoon National Guardsmen marched into Flint.

During the first days of the strike, Governor Frank Murphy followed a hands-off policy. When open fighting flared, he demanded that

negotiations take the place of armed force. Western Michigan units of the National Guard patrolled the active strike front, under strict orders from the governor not to take sides, but to preserve order. First face-to-face meetings of union officials and General Motors executives were called, with Governor Murphy as mediator. As the union and the company remained deadlocked, the center of mediation shifted to Washington. President Roosevelt, Secretary of Labor Frances Perkins, and John L. Lewis of the CIO attempted to aid the mediation program. Near the end of January, the scene of negotiations shifted back to Michigan, with Governor Murphy again attempting to bring the opposing sides to a conference table.

On Monday, February 1, in the midst of a widely advertised back-to-work campaign, the union struck again, this time at the Flint Chevrolet plants. Reinforced with newly organized flying squadrons, emergency brigades, and a woman's auxiliary, union workers staged a sitdown at Chevrolet Plant No. 9. During the fighting, other units of the union easily captured Chevrolet Plant No. 4, the main objective. Possession of the latter, which was the motor-assembly plant, stopped production in the Chevrolet factory. Union women aided in the fighting and barred the way of company guards with a locked-arm line, when the guards attempted to regain possession of the plants. After the rioting was over, National Guardsmen established a patrol on Chevrolet Hill to prevent further disorders. Strikers continued to hold Plant No. 4. A company attempt to force them out by turning off the heat in the plant was stopped by State troops.

Ten days later, after numerous conferences, the General Motors strike was settled. On the night of February 11, strikers marched out of the plants and staged a tumultuous parade in celebration of their victory. Terms of the settlement granted the UAWA bargaining rights for its members, but did not grant the desired closed shop.

Production of automobiles and auto parts is, by far, Flint's most important industry. Products of the auto industry normally amount to \$600,000,000 a year, with a pay roll of \$85,000,000. Industries of local character include a structural steel plant, a flour mill, and several breweries. Other articles manufactured in Flint are tents and awnings, trailer coaches, furniture, cigars, cement blocks, soft drinks, mattresses and bedding, and rubber stamps.

POINTS OF INTEREST

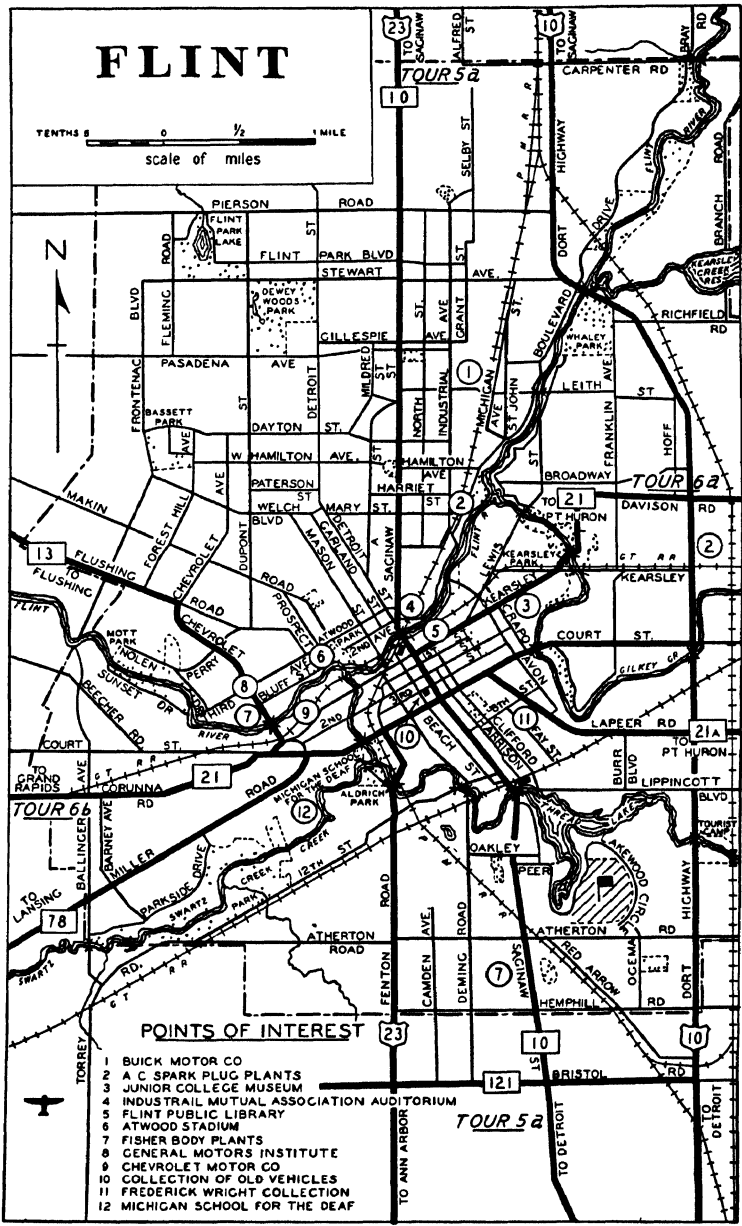
1. The BUICK PLANT (*tours on weekdays, 9:30 and 2:30*), Leith St. between Industrial and Michigan Ave., occupies 126 acres, and, with its 9,000,000 square feet of floor space, is Flint's largest factory. In the main assembly section, visitors can see the fabrication of the entire automobile.

2. The AC SPARK PLUG PLANTS (*open by permission*), No. 1 at Harriet St. and Industrial Ave., No. 2 at Dort Highway and Davison Road, manufacture spark plugs, speedometers, and 26 other motor

FLINT

TENTHS 0 1/2 1 MILE
scale of miles

N



POINTS OF INTEREST

- 1 BUICK MOTOR CO
- 2 A C SPARK PLUG PLANTS
- 3 JUNIOR COLLEGE MUSEUM
- 4 INDUSTRIAL MUTUAL ASSOCIATION AUDITORIUM
- 5 FLINT PUBLIC LIBRARY
- 6 ATWOOD STADIUM
- 7 FISHER BODY PLANTS
- 8 GENERAL MOTORS INSTITUTE
- 9 CHEVROLET MOTOR CO
- 10 COLLECTION OF OLD VEHICLES
- 11 FREDERICK WRIGHT COLLECTION
- 12 MICHIGAN SCHOOL FOR THE DEAF

products. These factories are often cited in industrial circles for their safety and cleanliness.

3. FLINT JUNIOR COLLEGE, Crapo St. between Kearsley and Court Sts., stands on the campus also occupied by Central High School and Whittier Junior High School. The college's old vine-covered brick structures, formerly hospital buildings, emphasize the modernity of the two high-school buildings near by. The college offers the first two years of collegiate work, and its credits are transferable to any university. The JUNIOR COLLEGE MUSEUM (*open 1-5 weekdays during school term*) contains a large loan collection of Americana, including extensive memorabilia of the Revolutionary War period. The museum claims one of the country's most complete displays of American Indian relics.

4. The INDUSTRIAL MUTUAL ASSOCIATION AUDITORIUM, E. 2nd Ave. near N. Saginaw St., a massive brick structure with Italian detail, built in 1929, is the leading recreational center in Flint and the second-largest building of its kind in the State. It is owned by the Industrial Mutual Association, originally sponsored by General Motors and now supported by workers' weekly dues of \$5 a year, plus the revenue from the association's activities. The building contains halls, offices, gymnasiums, and a theater with a seating capacity of nearly 7,000. The I.M.A. sponsors professional and inter-factory sports, and supports a male glee club, a woman's chorus, orchestras, and bands. Membership is primarily for the employees of General Motors plants.

5. The FLINT PUBLIC LIBRARY (*open 9-9 weekdays*), E. Kearsley and Clifford Sts., is a domed two-story stone structure of Renaissance design, a gift of Andrew Carnegie in 1905. The library, which has 213,649 volumes, developed from a subscription library established by the Ladies Library Association in 1851. Its most highly prized volume is a copy of Audubon's elephant-size folio inscribed, '*Birds of America*, from the original drawings by John J. Audubon. Reissued by J. W. Audubon, N. Y. Roe Lockwood, 1860.' There is also a collection of 200 volumes of fiction, in which all or part of the scenes are laid in Michigan or on the Great Lakes; many are autographed by the authors.

6. ATWOOD STADIUM, W. 3rd Ave. between Prospect and Begole Sts., was made possible largely by gifts from the family for which it is named. The amphitheater, seating 20,000, is used for band concerts, assemblies, baseball, football, and hockey games.

7. The FISHER BODY PLANTS (*open by permission*), No. 1 at 4300 S. Saginaw St., No. 2 at 201 N. Chevrolet Ave., are the largest body-building plants in the world. One of the features is a man-operated press, unequaled in size anywhere, used primarily for making body tops from flat sheets of metal.

8. The GENERAL MOTORS INSTITUTE, Chevrolet and W. 3rd Aves., is sponsored and conducted by General Motors Corporation. Established in 1919 in connection with the Industrial Fellowship League, the Institute was affiliated in 1923 with the educational department of

the Industrial Mutual Association. When the new building was constructed in 1927, it became officially known as the General Motors Institute. The program combines technical and theoretical training and practical work in the plants. The 10,000 students who either attended the Institute or took extension courses in 1938 came mainly from the company plants, although there are some noncompany, out-of-town, and foreign students.

9. The CHEVROLET PLANTS (*weekday tours at 10 and 2*), offices at Chevrolet Ave. and Bluff St., occupy an 80-acre site. The buildings, containing 1,961,000 square feet of floor space, stretch along both sides of the Flint River. They include a car and truck assembly plant and two great manufacturing plants, producing all the engines and pressed-metal parts required by Chevrolet's 10 assembly plants. Vast as it is, the Flint factory does not represent a complete motorcar unit, its products being supplemented by manufacturing plants in other cities and States. In 1937, the Flint assembly plant produced 73,403 units.

Outgoing freight includes assembled cars and trucks, supplying Michigan and neighboring States, and fenders, hoods, sheet metal trim, and engines shipped to nine other assembly plants. The Chevrolet plant receives finished bodies from the Fisher plant by overhead conveyor, crossing Chevrolet Avenue to the car assembly plant. The buildings include a powerhouse, an office building, and a maintenance building; plants for car assembly, manufacture of engines, sheet metal, fenders, and hoods, woodworking, final inspection, and conditioning; the buildings of the apprentice school, the service school, and the hospital; and the parts and service buildings.

On entering the interior of the automobile factory, the visitor is momentarily stunned by the deafening noise and the feverish motion of men and machinery, under the light of overhead arc lamps. Machinery is everywhere; presses, drills, grinders, punches, and cranes swing and gyrate and throb. Loaded conveyors pass overhead, following an intricate pattern. Electric trucks move slowly through the aisles. Amid the apparent confusion, men labor intently. Groups of workers hover around a huge press, timing their movements to the mechanical monster; here and there goggles, masks, or hoods cover faces bent over sputtering welding machines. In the aisles, in the recesses between lathes, workers carry tools, run errands, deliver messages, consult charts and schedules.

The impression of chaos soon changes, and the seemingly unrelated activities are recognized as parts of a whole that functions with clock-like co-ordination. 'Progressive assembly' brooks no interference or deviations. The naked frame is placed on the 'Line,' which runs the entire length of the factory. Moving slowly, the chassis is 'dressed,' as other parts are attached to it by mechanics who stand in a row on each side, each worker performing a single operation as the unit reaches him. Axles and wheels are attached as the frame proceeds; motor and radiator are installed. At the final assembly, the body, which has been traveling along a different conveyor, is lowered to the frame. Instru-

ments and lights are installed and connected, and, after a final inspection, the car leaves the line under its own power.

10. A COLLECTION OF OLD VEHICLES (*open by arrangement*), 703 Beach St., owned by the Algee-Gundry Funeral Home, contains a fine display of horse-drawn vehicles dating from 1850 and a collection of automobiles dating from 1896 to the present.

11. The FREDERICK WRIGHT COLLECTION (*open by appointment with owner*), 1507 Fay St., one of the largest in Flint, is composed of a wide range of valuable antiques and curios. Among the items displayed are American and Mexican Indian relics and an extensive collection of foreign guns and pistols.

12. The McCREERY MANSION (*private*), 526 Beach St., is the home of a Flint pioneer, Major Fenton R. McCreery, long in the United States diplomatic service. As rebuilt in 1872, the house shows the ornate style of that period.

13. The MICHIGAN SCHOOL FOR THE DEAF (*open by appointment*), W. Court St. and Miller Road, is a State institution, housed in several brick buildings on a wooded, 388-acre campus. More than 500 students are trained in the arts and sciences, with emphasis on domestic science for girls and manual training for boys. The school, founded in 1854, also offers a practical education in agriculture, utilizing the farm in the rear of the school park.

POINTS OF INTEREST IN ENVIRONS

Potter Lake, 12.5 m. (*see Tour 6*).

Grand Rapids

Railroad Stations: Union Station, 61-3 Ionia Ave. SW., for Pere Marquette Ry., Michigan Central R.R., Pennsylvania R.R., and New York Central System; 239 Michigan St. NW. for Grand Trunk Ry.

Bus Stations: Union Bus Terminal, 55 Oakes St. SW., for Greyhound, Short Way, Eastern Michigan (Blue Goose), True Blue, and North Star Lines

Airport: Kent County Airport, end of Madison Ave. SE at Pennel Road, 1/2 mile S. of city limits, for Pennsylvania Airlines, taxi fare 75¢, time 20 min

Taxis: 25¢ first 1/2 mile, 10¢ each 1/2 mile thereafter. No charge for extra passengers.

Urban Busses: 10¢ single fare, 3 tokens for 25¢

Suburban Busses: United Suburban Railway Co. Station, 46 Ottawa Ave. NW., for Grand Rapids to Galewood, Chicago Drive, Beverly, Ivan Rest, Grandville, and Jennison, fare 10¢ and 15¢, two 15¢ tickets for 25¢, Division Avenue Bus Line, Inc., 44 Ottawa Ave. NW., for Grand Rapids to Clyde Park, Godwin Heights, Home Acres, and Cutlerville, fare 10¢, 15¢, and 25¢.

Traffic Regulations: No turn against red light. Parking in downtown business district controlled by meters, 5¢ per hour; in suburban shopping sections, 15 min. to 2 hrs.

Accommodations: 36 hotels; tourist homes. Municipal Tourist Camp on E. bank of Grand River, Monroe Ave. NW. at Northwood St. NW., large pavilion, 16 cottages, kitchen apts., recreation, boating and fishing facilities, trailer space.

Information Service: Western Michigan Tourist Bureau, west side of Fulton Street Park, Fulton St. E. at 22 Sheldon Ave. NE.; Auto Club of Michigan, 199 Monroe Ave. NW.

Radio Stations: WASH, A.M. broadcasts; WOOD, P.M. broadcasts (both 1270 kc.).

Theaters and Motion Picture Houses: The Civic Players at Grand Rapids Civic Theater (Ladies Literary Club), 61 Sheldon Ave. SE., monthly amateur productions, the Lithuanian Art Theater group and the Catholic Theater Arts Guild, productions at St. Cecilia Society Bldg., 24 Ransom Ave. NE., and Central High School, Fountain St. NE. between College and Union Aves. NE.; 28 motion picture houses.

Swimming: Richmond Park, NW. cor. Richmond St. and Tamarack Ave. NW.; Briggs Park, SW. cor. Knapp St. and Oakwood Ave. NE.; Franklin Park, Alexander St. between Fuller and Benjamin Aves. SE., no fee for swimmers in public pool.

Golf: John Ball Park Golf Course, John Ball Park, 9 holes, greens fees, 10¢ for 9 holes, 15¢ for 2 rounds; Indian Trails Golf Course on State 37 at Kalamazoo Ave. SE. and Laraway Road, SE. city limits, 18 holes, greens fees, 75¢ per day, 50¢ for 18 holes, 35¢ for 9 holes; Mas-Cou-Ten Golf Course, Highland Park, 9 holes, greens fees, 10¢ for 9 holes, 15¢ for 2 rounds, Lincoln Country Club Golf Course (Lincoln Municipal Club) 2 miles W. of city on Lake Michigan Drive (State 50), 18 holes, greens fees, 35¢ for 9 holes, 50¢ for 18 holes; Gracewil Lawns Golf Course, 3 miles W. of city on Walker Road, 18 holes, greens fees, 35¢ for 9 holes, 50¢ for 18 holes; Ridgemoor Country Club, Burton St. and Brenton Road,

18 holes, greens fees, 35¢ for 9 holes, 50¢ for 18 holes; Silver Lake Golf Course, 10 miles NE. of city on US 131, 18 holes, greens fees, 75¢ a day, 50¢ after 5 P.M. *Baseball*: Ramona Athletic Park, SW. cor. Wealthy St. SE. and Lakeside Drive SE. (East Grand Rapids); Julius Houseman Field, NE. cor. Houseman Ave. NE. and Fountain St. NE.; Sixth and Valley Athletic Field, SE. cor. Valley Ave. NW. and Sixth St. NW.; Bigelow Stadium, 3937 Division Ave. S.

Annual Events: Furniture Frolics, twice a year, first week in Jan., and last week in June; Winter Sports Carnival, last week in Feb.; Shrine Ball, first week in Mar.; May Theater Festival, four plays of one week's run each, Pink Ball, last week in Nov.; Apple Show, first week in Dec.; *The Messiah*, by Calvin College, second week in Dec.; Christmas Season Concert, by the Grand Rapids Symphony Orchestra and the Grand Rapids Symphony Choral Society, third week in Dec.; Snow Ball, last week in Dec.

GRAND RAPIDS (655 alt., 168,592 pop.), nationally known as a furniture center and second-largest city in Michigan, lies along the Grand River about 25 miles east of Lake Michigan. The 10 main highways that converge at the city indicate its primary importance as a trade outlet for surrounding farmers and manufacturers. The city plan is orderly. Except for remnants of an early town plat and the winding drives of the fashionable Ottawa Hills section, streets run east and west, avenues north and south. Strewn among trim modern structures at the center of Grand Rapids are pompous mansions built in the 1860's and 1870's. Factories and warehouses line both banks of the river.

More than 25 per cent of the population is of Dutch stock. Many of these, with numerous Polish residents, are descendants of workers imported by furniture manufacturers. The Dutch are now scattered throughout the city, but their immigrant ancestors, chiefly from the provinces of Zeeland, Friesland, and Groningen, settled in five sections that were formerly modified reproductions of their home communities. On the west side and in the Oakdale Park district in the southeast section were two settlements definitely Frisian in tone; the 'Brickyard,' in the eastern section, was originally occupied by Zeelanders; a few blocks south, in what was once known as 'Chicken Town,' were the Groningers; southwest, along Grandville Avenue, was the largest of the settlements—peopled mainly by Groningers. The present Dutch inhabitants reside in typical workingmen's houses—plain frame structures, neat and clean, newly painted or frequently washed. A vestige of the Old World is evident in an occasional blind alley or narrow street, on which small houses are built to within several feet of the pavement.

West of downtown are two large Polish settlements congregated around the parishes of St. Adelbert and Sacred Heart. Another settlement of Poles, St. Isadore's parish, is on the northeast side of Grand Rapids, extending to and beyond the city limits. A small Lithuanian settlement borders St. Adelbert's parish on the northwest side of the city. South of Fulton Street, near the river, is a low-rent area populated by Negroes. Little Italy is on the south central side, centered near Division and Franklin Streets.

The first white settlers in Grand Rapids found several allied Indian tribes encamped along the west bank of the Grand River near the rapids, where fish and game were plentiful. A site for a Baptist Mission was selected in 1824, but building was not begun until late in 1825, and active mission work among the Indians was not started until 1826. In the latter year, Louis Campau settled in the Grand Valley and, in 1827, established a fur-trading post on the river bank, at what is now the foot of Huron Street. In 1831, he bought a large tract of land on the river—now bounded by Michigan and Fulton Streets and Division Avenue—which later became the center of Grand Rapids.

In acquiring this tract, Campau bested Lucius Lyon, who had also realized the future value of the site. Lyon immediately purchased land at the north of Campau's townsite. The wily Campau promptly platted his tract in a way that forced Lyon to dead-end the streets of his section against the cross-streets of the Campau plat. In preventing Lyon from bringing his streets down to the all-important river, Campau generated a bitter feud. Lyon retaliated when he laid out his plat. Foreshortened streets, streets running at odd angles, and the unused space that is now Campau Square, which was somehow overlooked in the bitter struggle to grab the 'heart of Grand Rapids,' remain today as evidence of this early rivalry.

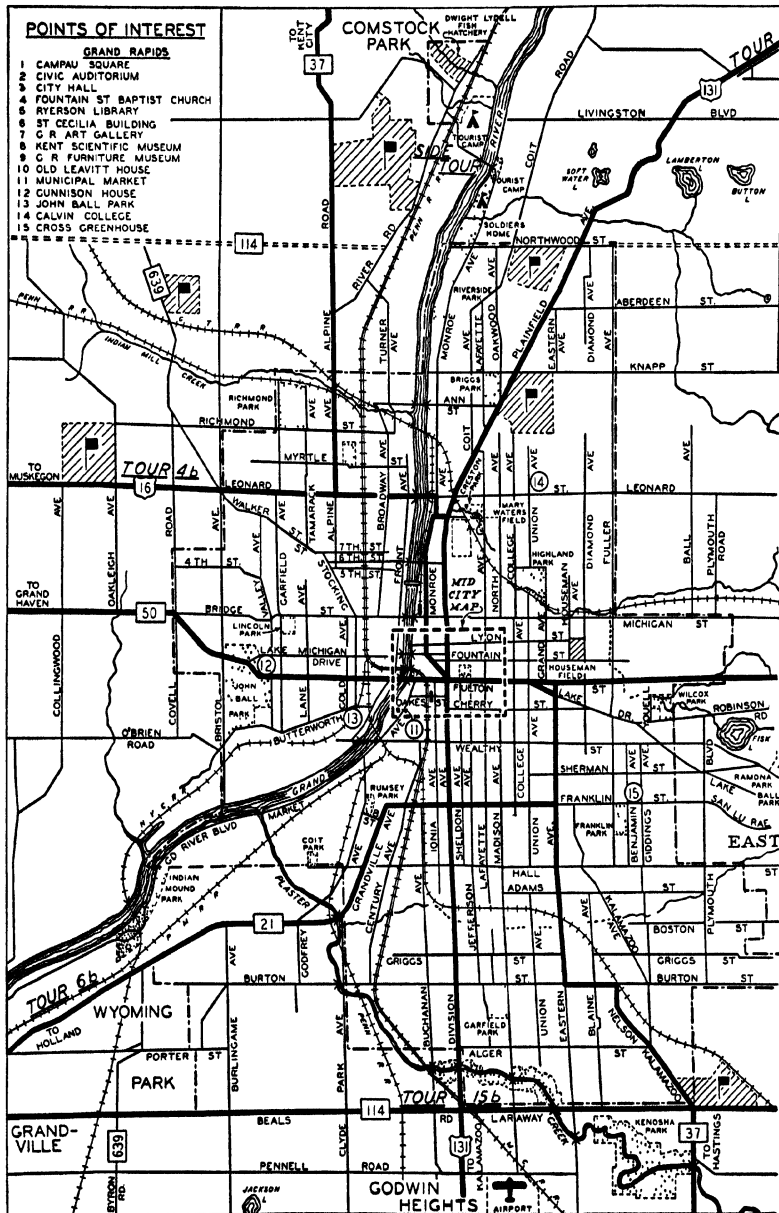
The village had been called Grand Rapids at Campau's request. Lyon, outwitted in the struggle for land and streets, used his political influence to change the name of the post office to Kent, the name he originally gave his section. But not for nothing had the Indians nicknamed Campau 'The Fox'; through his efforts the village regained its present name in 1842.

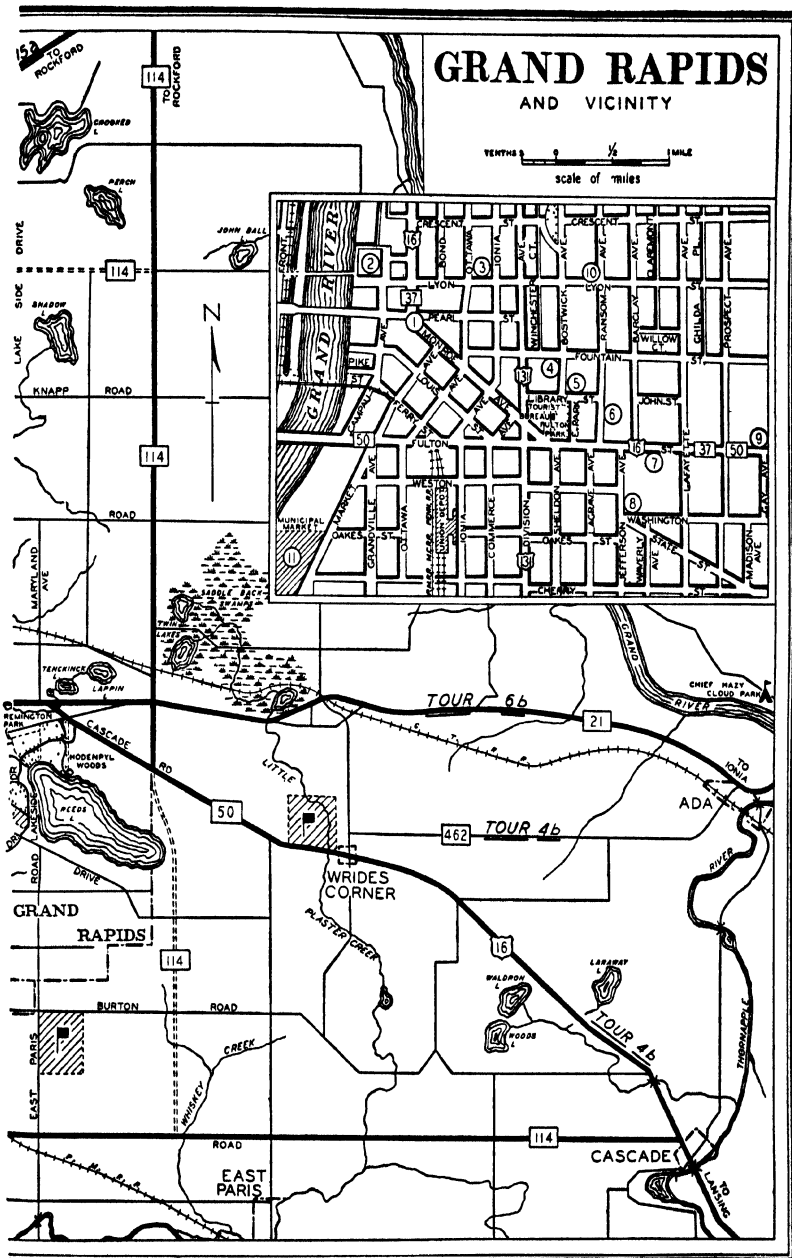
Steamboats began regular runs on the river between Grand Haven and the rapids in 1837. Some steamboats were built in Grand Rapids, and later hulls for Great Lakes vessels and boats for the Illinois and Michigan Canal were launched here. After the first railroad reached the city in 1858, river traffic declined, although freight was transported to Grand Haven by water as late as 1909.

By 1854, logging had become an important industry, and Grand Rapids entered the most vigorous phase of its development. Huge quantities of logs were floated down the Grand River to mills at Grand Rapids. Upstream mill owners, seeing the valuable timber floating unattended past their mills, often stole the logs and cut them into lumber. This practice, known as 'hogging,' precipitated fierce brawls along the Flat, Rogue, Grand, and other rivers. The river driver, a fantastic creature who rode the pitching logs downstream, came into existence. Grand Rapids began to boom on the profits of lumber and lumbermen. During the sixties, brothels, gambling houses, and notorious basement bars flourished at Campau Square. The caulked boots of swaggering river drivers ground the town's boardwalks into matchwood. To save his floors, the ingenious proprietor of the Eagle Hotel equipped his hostelry with a rack of carpet slippers and required the river drivers to change their footgear upon entering.

POINTS OF INTEREST

- GRAND RAPIDS**
- 1 CAMPAU SQUARE
 - 2 CIVIC AUDITORIUM
 - 3 CITY HALL
 - 4 FOUNTAIN ST BAPTIST CHURCH
 - 5 RYERSON LIBRARY
 - 6 ST CECILIA BUILDING
 - 7 G R ART GALLERY
 - 8 KENT SCIENTIFIC MUSEUM
 - 9 C R FURNITURE MUSEUM
 - 10 OLD LEAVITT HOUSE
 - 11 MUNICIPAL MARKET
 - 12 DUNNISON HOUSE
 - 13 JOHN BALL PARK
 - 14 CALVIN COLLEGE
 - 15 CROSS GREENHOUSE





Throughout the history of Grand Rapids, ice and log jams in the river have caused backwaters and serious floods. In 1838, the streets were jammed with ice cakes and the town was almost completely submerged; in 1852, boats floated into Waterloo (now Market) Street; and, in 1883, 150,000,000 feet of logs broke away from the booms after heavy rains, crashed down three railroad bridges, and left a trail of wreckage and destruction through the city. In 1904, more than 1,500 houses were flooded, the city was without light for several nights, and property damage exceeded \$1,000,000.

But the river's benefits outweighed its disadvantages. The stream that carried logs and shipping and operated sawmills was, moreover, the source of the first hydro-electric plant in the Middle West. In 1881, a permanent plant was erected on the west-side canal, as an outgrowth of experiments with a 16-light brush arc machine in the factory of the Wolverine Chair Company. The plant's original capacity of 56 arc lamps was increased in several years to 450 arc lamps and 1,000 incandescent lamps. It acquired 'sixteen run of stone,' which amounted to 240 horsepower, and was the first such plant in the world to furnish commercial electric service of any kind.

The factors that contributed to the development of Grand Rapids' furniture industry are neither few nor obscure. Sawmills had been established in the city, below the rapids, because of water transportation down the Grand River into Lake Michigan. Timber that came floating down the river furnished raw materials for the industry—pine for softwoods; oak, beech, and maple for hardwoods. Another factor was the number of enterprising men—George Widdicomb, Elias Matter, James and Ezra Nelson, C. C. Comstock, Charles R. Sligh, George W. Gay, and the Berkey brothers, Julius and William—who were attracted to Grand Rapids because of its natural advantages of raw materials and cheap water transportation. Although furniture was manufactured at Grand Rapids as early as 1838, Boston and Cincinnati supplied most of the Nation's needs. But, with so many favorable elements for growth, Grand Rapids forged ahead steadily, improving the volume and quality of its product, until, at the end of the century, it became the principal producer of furniture in America.

Grand Rapids furniture first gained national prominence at the Philadelphia Centennial Exposition in 1876. Soon Eastern buyers began to make the 1,000-mile trip to the city; by 1895, more than 100 came annually. The growth of the furniture business, however, was not without its difficulties. The practice—now illegal—of importing from abroad what amounted to indentured labor, coupled with substandard wages and hours, caused an accumulation of grievances among the industry's thousands of workers. On April 20, 1911, furniture workers numbering 6,500 went on strike, and 50 plants ceased production. Pressure from many sources against unionization and picketing was exerted. A Citizens' Alliance, organized during a teamsters' strike seven years before, was revived to smash the walkout, and a serious riot resulted. The pro-

longed strike exhausted union funds and broke the strikers' morale; after 17 weeks, it was ended by a 3-to-1 vote of the workers.

Today, there are numerous buildings with acres of floor space for the exhibition of furniture. During the seasonal markets, almost 3,000 buyers from all parts of the country visit the city to examine 500 lines on display. Grand Rapids, with the largest colony of designers in the world, is the style-market center of the industry. In 1937, it had 68 furniture factories, employing 13,000 skilled workmen. Although other centers are taking the lead in quantity production, the industry still looks to Grand Rapids for guidance in design.

Besides its furniture factories, Grand Rapids has large plants that manufacture auto bodies, auto accessories and parts, refrigerators, carpet sweepers, plumbing, flypaper, showcases, and numerous other products. In 1937, the city's 387 industrial establishments employed 21,584 workers and paid wages of \$25,000,000.

Prior to 1925, Grand Rapids was an important catalog-printing center, known particularly for half-tone work that showed the grain and color of wood. Such printing was directly associated with the furniture trade. Though Grand Rapids occupies a less important position in the graphic arts today, it still has many printing establishments.

Cultural institutions in the city include a small art museum; the Grand Rapids Symphony Orchestra, which gives a series of well-attended concerts each year, chiefly at Civic Auditorium; the Grand Rapids Public Library, with several branches, known for its remarkable collection of plates and works on furniture; and several art schools, two of which specialize in furniture designing. The Lithuanian Art Theater group, presenting plays in the native language, the Civic Players, and the Catholic Theater Arts Guild are foremost among the city's dramatic organizations.

Grand Rapids was the birthplace of Stewart Edward White, born in 1873 and now living in Burlingame, California, a popular writer of American-frontier historical novels and author of *The Riverman*, a novel dealing with Michigan's lumbering days.

Grand Rapids has a city-manager form of government. The manager is appointed by a commission of seven men, two elected from each of the three wards and the seventh elected at large to serve as mayor.

POINTS OF INTEREST

1. CAMPAU SQUARE, a small V-shaped city 'square' formed by the intersection of Pearl St. and Monroe Ave. NW., is the site of the trading post and log house built in 1827 by Louis Campau. On the southeast corner of the square is the GRAND RAPIDS NATIONAL BANK BUILDING, a 16-story structure, on the uppermost floor of which are radio stations WASH and WOOD. The building, designed by Williamson, Crowe and Proctor, is Renaissance in style, with a Doric treatment above the first floor.

2. The CIVIC AUDITORIUM, NW. corner Campau Ave. and Lyon St. NW., of modern design, is the city's most important public structure and its center for education, entertainment, and convention activities. It has a seating capacity of more than 5,000. The stage is completely equipped, even to an orchestra lift. The architects were Robinson, Campau and Crowe. An auxiliary auditorium, seating 900, is frequently used as a ball room.

3. The CITY HALL, Lyon St. NW. between Ottawa and Ionia Aves. NW., is a four-story structure of gray limestone. The sharply arched windows and narrow pointed gables indicate the Gothic phase of E. E. Myers' work, 14 years later than his design for the Renaissance-style capitol at Lansing. A square clock tower 100 feet high, with round turrets at each of the four corners, houses a huge bell.

4. The FOUNTAIN STREET BAPTIST CHURCH, 24 Fountain St. NE., is Italian Romanesque in design, built of light-brown, gray, and buff brick with Indiana limestone trim. This impressive and effective group of church, campanile, arcade, and parish house is a monument to the distinguished service and leadership of the late Alfred Wesley Wishart, pastor 1906-33, and reflects his belief in beautiful architecture as a cultural force. The carved sides and arch of the high portal, with sculptured over-door panel, *Our Lord and Little Children*, harmonize with the magnificent rose window of stone and richly patterned glass.

The memorial tower adjoining the church auditorium contains tubular chimes; it is connected to the parish house by a loggia. The interior of the galleried auditorium has a trussed roof of open timber work. In the east and west walls are a series of small painted windows, inspired by those of Chartres Cathedral and dedicated to past and present members of the congregation. The architects were Coolidge and Hodgdon, of Chicago.

5. The GRAND RAPIDS PUBLIC LIBRARY (*open 8:30-9 weekdays*), NE. corner Bostwick Ave. and Library St. NE., is in the Ryerson Library building, a modern Renaissance structure of Bedford stone. The gift of Martin A. Ryerson, Chicago, it was designed by Shepley, Rutan and Coolidge, of Boston. The library has more than 400,000 books and contains one of the largest and most comprehensive collections of works on furniture in the country, as well as 13,500 volumes on art.

6. The ST. CECILIA SOCIETY BUILDING (*open only during performances*), 24 Ransom Ave. NE., a two-story brick structure of Renaissance design, contains an auditorium in which the foremost concert artists have performed. The St. Cecilia Society claims the distinction of being the first women's music club in the country to erect and maintain its own recital hall. At the time of its construction (1893), the only other institution of its kind was in Russia.

7. The GRAND RAPIDS ART GALLERY (*open 10-5 Tues.-Sat., 2-5 Sun., 1-5 Mon.*), 230 Fulton St. E., housed in a building of Greek Revival design, has a permanent collection of paintings, supplemented

at regular intervals by traveling exhibitions and by lectures on art. The wooden pillars of the building were removed from a bankrupt hotel at Port Sheldon (*see Tour 15*).

8. The GRAND RAPIDS PUBLIC MUSEUM (*open 8:30-5 weekdays; 2:30-5 Sun. and holidays*), housed temporarily (1940) in the Lafayette School, 409 Lafayette St. SE., will occupy a two-story structure of modern design at the NE. corner of Jefferson and Washington Aves. The museum, city owned and under the direction of the art and museum commission, contains collections of mammals, birds, reptiles, fish, plants, and minerals.

Designed by Roger Allen of Grand Rapids, the new building is being completed at a cost of \$180,000. The exterior lines are sharply rectangular. Above a base of polished black granite, the south and west walls are faced with buff limestone, which blends with the light-colored brick used in the north and east elevations. The structure embodies modern principles of air-conditioning and artificial lighting; the only natural light, except in the offices at the rear, is admitted through sections of glass block on the street sides, designed for daylight illumination of stair landings and the central hall.

The first floor contains natural history exhibits, and the second floor ethnological displays. Fresh fruits and wild flowers are exhibited in season. The mineral wealth of the United States is represented by thousands of specimens. The Indian, Eskimo, and Pioneer collections and those of Egypt, China, Japan, India, and Africa include old armor, weapons, pottery, wood carving, and jewelry. Artifacts from Indian mounds in the Grand Rapids region are also displayed. The pottery collection contains many Indian pieces from Michigan, as well as perfect examples of the black-topped red pottery made by Egyptians in 2000 B.C., and jars and vases from ancient Greece. A notable exhibit portrays man's conquest of darkness, from the use of the crude pine torch, the candle, and the lamp, to electric illumination.

9. The GRAND RAPIDS FURNITURE MUSEUM (*open 11-5 Tues.-Sat., 3-6 Sun.*), 427 Fulton St. E., displays American furniture from the earliest Colonial times to the present. The museum, recently opened to the public, is unique in that its sole function is to depict the evolution of household furniture. Outstanding pieces by Grand Rapids craftsmen are exhibited. The museum is in the old brick and half-timber mansion of T. Stewart White, former lumber baron and father of Stewart Edward White.

10. LEAVITT HOUSE (*private*), NW. corner Lyon St. and Ransom Ave. NE., was built in 1858 of stones from the Grand River. Street improvements, necessitating excavation of earth from beside the house, have left it high in the air on the rim of a bluff.

11. The MUNICIPAL WHOLESALE MARKET (*open 5 A.M.-8:30 A.M.; producers' fee 25¢*), 109 Market Ave., completed in 1935 as an F.E.R.A. project, occupies 400,000 square feet. In the early morning hours, the market is a tumult of sounds, smells, and colors, as hucksters, market operators, and retailers assemble among mounds of

vegetables to make their daily purchases. There are also three municipal retail markets, at Leonard St., Fulton St., and South End, where farmers and truck gardeners sell their produce.

12. JOHN BALL PARK (*open daylight hours*), near city limits on Fulton St. W., 137 acres of forested hills, has a Zoo (*open 8-5 daily*) containing birds, reptiles, and small animals.

13. The GUNNISON OCTAGONAL HOUSE (*private*), 706 Butterworth St. SW., is a cobblestone structure, built in 1860 by Ira Jones, and first occupied by Captain Gunnison of the United States Army.

14. The CROSS GREENHOUSES (*open 8-5 daily*), 1226-28 Union Ave. NE., has under cultivation 20,000 Easter lilies, about 50,000 tulips of various hues, and more than 30,000 rose bushes. Prior to the spring bloom, the hothouses are filled with thousands of chrysanthemums. Insulated trucks make it possible to deliver fresh flowers to other Michigan cities.

The FURNITURE FACTORIES are in two groups, one about a mile north of the city's center and the other about a mile south. (*Visitors are not usually admitted, but tours and guide service can be arranged by telephoning the plant manager or superintendent.*) Among the larger factories are: BERKEY & GAY FURNITURE PLANT, 425 Monroe Ave. NW.; LUCE FURNITURE PLANT, 655 Godfrey Ave. SW.; JOHN WIDDICOMB PLANT, 601 5th St. NW.; AMERICAN SEATING PLANT, 901 Broadway Ave. NW.; ROBERT W. IRWIN PLANT, 23 Sumner Ave. NW.; WIDDICOMB FURNITURE PLANT, 650 Dewey Ave. NW.; and SLIGH FURNITURE PLANT, 211 Logan St. SW.

The manufacture of furniture begins in the lumber yard, where various kinds of lumber are piled on trucks and transported to dry kilns to be seasoned and dried. The material is then removed to the culling room, where it is cut into suitable lengths. Thence it is sent to the machine room to be fashioned into various sizes and shapes, according to style and design. In the upholstering department, women cut and sew materials, while the men specialize in 'springing up'—arranging and tying the springs. Skilled workers perform the upholstering proper. A greater division of labor, resembling the assembly line of an automobile factory, has recently been introduced in the trade. No one man finishes an entire job. Some upholster only the arms, others the backs, while still others produce only cushions. In the finishing room, workmen apply coats of filler, stain, and varnish. Before the last coat, the first and second applications are rubbed, to produce a smooth surface and prepare the wood for the final finish.

The hand-carving room is the aristocratic department of a furniture factory. Here expert craftsmen produce expensive furniture on machines that carve as many as 18 pieces at one time. The operator guides his master tool over the model or master-piece, which has been carved by hand. The finishing touches to the machine product are applied by skilled hand carvers. Knobs, handles, and other trimmings are attached in the turning room. The piece is next sent to the packing room, thence to a warehouse or a shipping room.

15. CALVIN COLLEGE, Franklin St. SE. between Benjamin Ave. and Giddings Ave. SE., occupies a 10-acre campus. Set back from the street and surrounded by spacious lawns, the central building is a two-story, red brick structure of Georgian design, with an entrance portico and a central cupola. Its severe simplicity is greatly relieved by a portal of grand proportions. The three-story dormitory at the southeast and the two-story seminary to the northwest follow the general architectural style of the main building. The one-story HEKMAN MEMORIAL LIBRARY (*open by special permission Sept.-May 8-5 Mon.-Fri.; 9-12 noon Sat.; 7 P.M.-9 P.M. Tues. and Thurs.; June-Aug. 2 P.M.-8 P.M. Wed.*), on the southeast corner of the campus, echoes the design of the main building but lacks the colonnaded entrance.

Calvin College, maintained by the Christian Reformed Church (in North America) was incorporated in 1878 as a theological school (*see also Holland*). In 1894, the educational policy was broadened to include liberal-arts students. The college confers a bachelor's degree in liberal arts and in education. Three-year courses—pre-law, pre-medical, and pre-forestry—entitle candidates to degrees *in absentia* after completion of one year at a university. The present four-year pre-seminary course leads to a degree of bachelor of arts. Combined with a subsequent three years of seminary training, it qualifies graduates to enter into the ministry of the church; some students also become ministers in Dutch Reformed and Presbyterian churches.

POINTS OF INTEREST IN ENVIRONS

Dwight Lydell Hatchery, 6 m., Reed's Lake, 3.5 m. (*see Tour 4*).

Holland

Railroad Station: 7th St. and Lincoln Ave. for Pere Marquette Ry.

Bus Station: 7th St. and Central Ave for Peoples Rapid Transit Co., and Greyhound and Allegan Lines.

Airport: Holland Airport, 3 miles NW. of city, on Ottawa Beach Road. No scheduled service.

Taxis: Rate 25¢ per mile; fractional mileage computed to nearest mile.

Docks: Municipal Dock, foot of Kollen Park, Chicago, Duluth and Georgian Bay Co Dock, foot of 16th St; Commercial Dock, foot of 8th St.

Traffic Regulations: No one-way streets except during Tulip Festival; no turn against red light.

Accommodations: 3 hotels; boarding houses; tourist lodges and hotels in resort area.

Information Service: Chamber of Commerce, Warm Friend Tavern, Central Ave. and 8th Sts.

Motion Picture Houses: 2.

Swimming: Holland State Park at end of Ottawa Beach Road, and Tunnel Park, end of Lakewood Blvd., both on Lake Michigan.

Golf: Holland Country Club, 2 miles E of city on US 21, 18 holes, greens fees, \$1 50 all day, \$2 Sun. and holidays, Ottawa Beach Club, 6 miles W. of city on Lake Macatawa, 9 holes, greens fee, 50¢

Riding: Castle Park, S side of Harbor; Waukazoo, N. shore of Lake Macatawa.

Tennis: Hope College, Columbia Ave. and 12th St; municipal playground, 21st St and Maple Ave; Holland Country Club, 2 miles E of city on US 21.

Athletics. Riverview Park, 5th St. and Columbia Ave; Municipal Playground, 21st St. and Maple Ave, Kollen Park, 10th St. and Van Raalte Ave.; City Playground, E. 19th St. and College Ave

Annual Events: Tulip Festival (Tulpen Feest), 3rd week in May Sail and Motor Regatta on Lake Macatawa, July and Aug. Two horse shows in Aug. Christmas Eve Carol Sing.

HOLLAND (612 alt., 14,346 pop.), 90 per cent of whose residents are of Dutch descent, is at the mouth of the Black River on Lake Macatawa, a thin finger of Lake Michigan reaching six miles inland. The community is a summer recreation center and the showplace of perhaps the largest area of Dutch influence in the United States. More than 30,000 people in the vicinity of Holland trace their ancestry to the Netherlands, and villages in the region bear such appropriate names as Borculo, Zeeland, and Vriesland.

The founders of Holland established industrial, commercial, and residential zones that are still maintained. The business district is saved from commonplaceness by the narrow margin of several Dutch novelty

shops, one of which houses a *klompen* (wooden shoe) factory. West of the business section are vine-covered factories, the waterfront, and the bordering flats—ablaze with tulips in spring. The residential area contains freshly painted houses, each with its cropped lawn and tulip garden. Eighty-four per cent of the community's dwellings are owned by their occupants, but the architecture, in general, shows little Dutch influence. The 28 churches that raise their needle-point spires from every part of Holland—one to every 550 inhabitants—are predominantly Gothic, more akin to England than to the Netherlands.

At other times an ordinary work-a-day American city, Holland assumes exotic aspects during the *Tulpen Feest* in the third week of May. Dutch foods are suddenly listed on the menus of local restaurants. The male inhabitants don baggy breeches, the women billowy skirts, and all clump around in *klompen*. The festival week program includes tulip tours, Dutch parades, Dutch marionettes, Dutch market places, psalm singing, dancing on the green, and dramatic productions by the Hope College Players. Fifty strains of tulips are exhibited throughout the city. Conceived in 1929 by a local school teacher as an expression of pride in Holland's flowers, the *Tulpen Feest* annually attracts about 500,000 visitors and \$500,000 in trade.

Immigration of the Dutch to Michigan was preceded by circumstances similar to those that had sent the Puritans to New England. A revival movement within the Dutch State Church had produced secessionists, who were subsequently persecuted by civil authorities. 'The Society of Christians for the Holland Emigration to the United States' was formed, with articles of agreement comparable to the *Mayflower* compact of the Pilgrim fathers. In the autumn of 1846, Dr. A. C. Van Raalte, a leading secessionist pastor, sailed from Rotterdam with 53 persons; in January 1847, the emigrants bought 1,000 acres of Government land on the present site of Holland.

Van Raalte's little band of settlers cultivated the rich loamy bottom lands of the Black River Valley, early campgrounds of the Ottawa and Potawatomi Indians, contending against many odds to build a solid future in agrarian and commercial enterprise. Among the colonists' first acts was the construction of a log church, at the site of the Pilgrim Home Cemetery. The steady arrival of other immigrants throughout the spring and summer of 1847 increased the population to about 1,700. Many of the land deeds stipulated that wines or spirituous liquors could not be manufactured on the property, and that establishments for gaming, dancing, or theatrical performances could not be operated. A weekly newspaper, *De Hollander*, was published in Dutch and English. A pioneer school, founded in 1851, was reorganized six years later as the Holland Academy. Hope College was incorporated in 1866.

In 1871, three years after Holland had been incorporated as a city, fire broke out and, fanned by a strong wind, destroyed 76 business houses and 243 homes in two hours. The toil of years was undone, but Dutch perseverance rebuilt a more beautiful city, making liberal use of sandstone quarried near by.

The austere Calvinism of the Dutch Reformed Church is still the dominant factor in Holland's culture. The church controls the two institutions of higher education, Hope College and Western Theological Seminary. Today, under the massive hand-hewn beams of the Old First Church (1856) sit the descendants of Dominie Van Raalte's little band, following the stern precepts of Calvin. The church has relaxed to the extent of shortening its services. In the old days Hollanders attended three- to four-hour services twice each Sunday. To keep awake during the long sermons, members of the congregation carried perfume boxes and peppermint lozenges; the sexton used a long pole with a squirrel's tail attached at the end to tickle sleepers' noses—sometimes at the behest of the preacher, who would interrupt his discourse to denounce a dormant worshipper. Grace before meals, which in some families formerly consumed so much time that the food needed rewarming, has been considerably shortened to conform with the shrill whistles of industry.

The working population manufactures cosmetics, furniture, beet sugar, leather goods, aniline dyes, and furnace appliances. The Holland Furnace Company, established here by John P. Kolla in 1906, is reputedly one of the two largest manufacturers of heating appliances in the world (*see Detroit*). Holland's poultry raisers ship 14,000,000 baby chicks annually.

Holland and the surrounding area attract numerous artists and writers. Best known among the latter is Paul de Kruif (*see Literature*), who was born in Zeeland, a few miles east of Holland. Others included in the Holland writers group are Junius Wood, Jr., and the newspaper writer, George Slocombe. Frazier Hunt, whose book, *The Education of an American* (1938), records a newspaperman's reactions to the modern world, was a former summer resident.

Holland has the aldermanic system of government. There are no saloons or dance halls. Although the Reformed religion manifests itself concretely in the city's blue laws—unusual in Michigan—so also does Dutch thrift speak eloquently in the municipal record of more than 90 per cent of tax collections—equally unusual in Michigan.

POINTS OF INTEREST

WESTERN THEOLOGICAL SEMINARY, 12th St. between College and Columbia Aves., was established in 1866 as the theological department of Hope College, to prepare students for the ministry of the Dutch Reformed Church. In 1884, the seminary was separated from the college and given its present name. It has a faculty of 6 (1939) and an enrollment of 37. Shaded by oaks and maples on the one-and-a-half-acre campus are four brick structures: Zwemer Hall, Semelink Hall, Beardslee Library, and a small heating plant.

HOPE COLLEGE, 12th St. and College Ave., a coeducational liberal-arts school controlled by the Dutch Reformed Church, has a faculty of 30 and an average enrollment of 500. On its rolling, elm-shaded, 18-

acre campus are 8 buildings: Van Vleck Hall (1857); Oggel House, home of the first president; President's Home (1886); Grave Library (*open Sept. 15-June 15, Mon.-Fri., 8-12 Sat., 6 P.M.-9:30 P.M. Mondays*) and Winant's Chapel (1894); Van Raalte Memorial Hall (1903); Carnegie Gymnasium (1906); and Elizabeth R. Voorhees Women's Dormitory (1907). In Grave Library, open to all Holland students, are the William E. Griffis Dutch Collection, containing several thousand volumes, and an Audubon Birds Collection. Memorial Chapel (1929) is of modified Gothic architecture, with a pinnacled corner tower. Within the chapel is an auditorium, seating 2,140, and a Skinner organ with 20 chimes. Hope College derives its name from Van Raalte's dedicatory address: 'This is my anchor of hope for this people in the future.'

The OLD FIRST CHURCH (also called the 'Old White Church' and the 'Pillar Church'), 9th St. and College Ave., constructed in 1856, is the only historical landmark that survived a disastrous conflagration of 1871. It is in the Greek Revival style, with a massive pedimented Doric portico. Above the pediment is an octagonal arched belfry, with a cupola and weather vane in the form of a four-foot hand-hammered copper rooster, symbolizing the nemesis of Peter. A huge wine bottle, utilized as a pivot for the rooster weather vane when no other instrument would hold, is still in service after three-quarters of a century.

When, in 1882, the Dutch Reformed Church was schismatized over the question of admitting Freemasons to membership, the majority of the Old First Church congregation joined the Christian Reformed Church (in North America). Consequently the Old First Church is now named the 'Ninth Street Christian Reformed Church.'

The FIRST REFORMED CHURCH, 9th St. and Central Ave., dedicated in 1887 by the antisecessionist group, is an architectural hybrid as a result of additions made between 1920 and 1922. Constructed of stone and brick, its arched entrance is flanked by low square towers.

CENTENNIAL PARK, River Ave. and 12th St., is in the center of the downtown business section. Its elaborate flower beds and horticultural gardens are in full bloom during the Tulip Festival.

The NETHERLANDS MUSEUM (*open 1-5 daily and 7 P.M.-9 P.M. Tues., Wed., and Sat.; adm. 10¢*), 19 West 10th St., is housed in the Peoples State Bank Building. Opened in 1937, the museum is dedicated to the preservation of mementoes of Holland's past; it is jointly sponsored by the Netherlands Pioneer and Historical Foundation and the WPA Historical Records Survey. Founded with the co-operation of western Michigan's old Dutch families, the museum has documents, land grants, antiques, letters from the Netherlands, and an exceptionally fine collection of snuffboxes and ancient family Bibles. Of particular interest to homemakers is a reproduction of an old Dutch kitchen, including a set of 300-years-old chinaware. The museum conducts an educational program in co-operation with the National Youth Administration.

KOLLEN PARK, foot of 10th and 11th Sts., a 19-acre tract skirting Lake Macatawa, has facilities for swimming, fishing, bathing, skiing, and tobogganing.

The DUTCH NOVELTY SHOP, River Ave. at 4th St., also known as the Wooden Shoe Factory, employs about 150 workers in the manufacture of wooden souvenirs and wooden shoes that are shipped to all parts of the country. Although the factory is not open to the public, its products are shown in a large DISPLAY ROOM (*open 7-6 weekdays spring and summer, 8-5 autumn and winter*), in which a master craftsman, who has made more than 30,000 pairs of wooden shoes, explains to visitors the processes of making *klompen*. The shoes are handmade by one man, from start to finish. Blocks of green willow, or a type of poplar, are first shaped to the outside form; then augers and gouges are used to carve the hollow for the foot. Except for one measurement that determines the size, the entire process, including fitting, is done by eye. Although machines that fashion the outside of the shoe satisfactorily are being developed in other cities, no substitute has been found for handwork on the inside of the *klompen*, where it must fit the foot. The Holland factory produces between 2,500 and 3,000 pairs of wooden shoes annually.

WINDMILL PARK, N. River Ave. at the Black River, is the setting for Holland's full-sized reproduction of a Dutch windmill. Featured here, as in other sections, are mass plantings of varicolored tulips in designs of windmills, clock faces, wooden shoes, and other figures related to Netherlands life.

POINTS OF INTEREST IN ENVIRONS

Holland State Park, 6.5 m., Port Sheldon, resort, 12.5 m., Old Baldy, sand dune, 13 m. (*see Tour 15*).

Kalamazoo

Railroad Stations: Willard St. between Rose and Burdick Sts., 4 blocks N. of Michigan Ave., for Michigan Central R.R. and New York Central System; Pitcher St. and Michigan Ave. for Pennsylvania R.R.

Bus Stations: Portage St. and Michigan Ave. for Greyhound Line; N. Rose and Water Sts. for Short Way, Blue Goose, Peoples Rapid Transit, Indian Trails, and Fort Wayne-Kalamazoo Lines.

Airport: Municipal airport, Lindbergh Field, Portage St., 3 miles S. of city; taxi fare 75¢, time 15 min.; no scheduled service.

Busses: Fare 5¢.

Taxis: 25¢ to any point within city limits; no charge for extra passengers.

Traffic Regulations: No one-way streets except Exchange Place, between Burdick and Rose Sts., half block S. of Michigan Ave. No turn against red light.

Accommodations: 26 hotels; boarding houses and tourist homes.

Information Service: Auto Club of Michigan, 451 Michigan Ave.; Kalamazoo Chamber of Commerce, 111 N. Rose St.

Radio Station: WKZO (590 kc.).

Theaters and Motion Picture Houses: Civic Auditorium, Park and South Sts., productions by Civic League and colleges; Central High School Auditorium, W. Dutton St. at Westnedge Ave., productions by schools and colleges; 5 motion picture houses.

Swimming: Milham Park, Portage Road, 4 miles S. of city; Y.M.C.A., Park and Main Sts.

Golf: Municipal Golf Course, 2205 W. Michigan Ave., 18 holes, greens fees, 25¢ for 9 holes, 40¢ for 18 holes, Milham Park Golf Course, Milham Park, Portage Road, 4 miles S. of city, 18 holes, greens fees, 25¢ for 9 holes, 40¢ for 18 holes for women, men, 50¢ for 9 holes, 75¢ for 18 holes; Arcadia Brook Golf Course, 1659 W. Michigan Ave., 18 holes, greens fees, 40¢ for 9 holes, 75¢ for 18 holes.

Tennis: Upjohn Park, E. Vine and Jasper Sts.; Crane Park, Westnedge Ave. and Maple St.; Milham Park, Portage Road, 4 miles S. of city; La Crone Park, Patterson St. and Cobb Ave.; reservations at recreation office on fourth floor of City Hall at 239 W. South St.

Riding: Peter the Great Riding Stables, 1921 W. Michigan Ave.; Oakland Riding Stables, Benjamin Ave. near Oakland Drive; Holt Milan, 1428 Baker Drive.

Athletics: Upjohn Field, E. Vine and Jasper Sts.; Kalamazoo College Field, Oakland Drive, between Academy and Lovell Sts.; Western State Teachers' College Field, W. Michigan Ave. near Oakland Drive, Parchment Athletic Field, 2½ miles N. of city on Riverview Drive.

Annual Events: Pansy Festival, between mid-April and Memorial Day, featuring parades and contests.

KALAMAZOO (775 alt., 54,786 pop.), 30 miles east of Lake Michigan, lies along the lower reaches of the Kalamazoo River, at its confluence with Portage Creek. The rick black muck of the improved

marshland along the two waterways is especially suited for celery growing, and vast green celery fields surround, and even penetrate, Kalamazoo's limits. In spring, these fields are dappled with pansies, rotated as a commercial crop. The river, dotted with small islands, provides power for paper mills.

Kalamazoo has been made a symbol of Midwesternism by authors who cannot resist the sound of its name. Carl Sandburg's contribution to this idea reads:

Kalamazoo, you ain't in a class by yourself;
I seen you before in a lot of places.

Kalamazoo is not, however, as ordinary as some writers would portray it. An art center and three colleges give the community a cultural background far superior to that of the average Midwestern city. Although it is an important industrial center, belching smokestacks and cindery wastelands modify but slightly its college-town aspect.

The two main business streets are exceptionally wide. The downtown area, centered at Main and Burdick Streets, is composed mainly of old two- and three-story structures. The one 'skyscraper,' a 15-story bank building, looks down on peddlers hawking celery and peanuts—a sight peculiar to Kalamazoo. Peculiar to Kalamazoo also are the many narrow alley-streets in the business section, passageways first provided to afford access to buildings that might be erected at the rear of the original structures. Many of the alleys are still privately owned, a circumstance that has caused the city government much trouble.

The uniformity of the average residences, for the most part frame bungalows, is relieved by the trees that make Kalamazoo a mass of green in summer. In the hilly northwest and southwest sections, inset among winding drives and boulevards, are imposing suburban residences. Kalamazoo's less attractive districts, including industrial plants, the railroad yards, and the low-rent area, follow the river, which meanders through the eastern portion. The city's only foreign neighborhood lies along Fourth Street and houses mainly Hungarians and Poles.

The river is responsible for the city's distinctive name. According to popular beliefs, 'Kee-Kalamazoo,' meaning Where the water boils in the pot, was applied to the river by Indians, who had discovered hundreds of bubbling springs in it. The cumbersome name was given to a trading post established on the banks of the river in 1823. When Titus Bronson, the county's first permanent settler, came here in 1829, he changed the name to 'Bronson.' He was an outspoken man who loved his liquor, a taste not shared by temperance-advocating village big-wigs. The Indian name was consequently restored in its present shortened form in 1836.

In 1847, a group of Hollanders (*see Holland*), seeking refuge from religious persecution, settled here. In the meantime, Kalamazoo's future in agriculture was being planted in the backyard of Scotsman James Taylor. Taylor experimented with celery seeds imported from England,

and, in the fall of 1856, celery was included on a banquet menu at the Burdick House. The guests received the new vegetable indifferently, however, and celery was practically forgotten for ten years. But a persevering Dutchman named Marinus De Bruin began to cultivate the plant, sending his children out to sell it from house to house. De Bruin's faith in celery convinced skeptics, who had believed that it was a poisonous weed, an opinion based on its similarity to the hemlock plant. De Bruin's sales method proved effective, and before long celery was established in Kalamazoo. In 1870, industrious Dutch immigrants took over celery growing and began to convert mosquito-ridden swamps into profitable farms.

With the adjacent marshes turned to good account, Kalamazoo began to advertise its water-power facilities, inviting 'capitalists who would embark on a profitable enterprise to establish a paper mill in this village.' The invitation was accepted by the interest that established the Kalamazoo Paper Company, forerunner of a group that was to make the city a paper-mill center. New industries appeared in the latter part of the nineteenth century, as Kalamazoo found itself an important town on the Chicago-Detroit road. Stove companies and iron and allied industries were founded. The A. M. Todd Company came upon the scene as manufacturer of essential oils; and Dr. William E. Upjohn started a small pill-producing establishment, from which developed the city's present large pharmaceutical industry. Kalamazoo was incorporated as a city in 1884; it acquired a horsecar line the same year, and installed its first electric light and power plant in 1886. With the beginning of the twentieth century, the educational system grew rapidly, and many new buildings were constructed. Through the leadership of Dr. Upjohn, Kalamazoo in 1918 became one of the first Michigan cities to adopt a commission-manager form of government. Kalamazoo's new city hall was erected in 1931; its new county building, one of the finest in Michigan, was dedicated in 1937.

In 1937, Kalamazoo's 151 industrial establishments employed 9,665 workers and manufactured goods valued at more than \$70,000,000. Paper making is the most extensive industry, with 13 mills that produce 2,500,000 pounds of paper daily. The commercial cultivation of peppermint is carried on extensively in Kalamazoo County, and Kalamazoo is one of the largest producers of oil of peppermint in America. Manufactures are diversified, including stoves, drugs, taxicabs, furnaces, auto bodies, transmissions, caskets, clothing, gas heaters, fishing tackle, playing cards, and musical instruments. The city is the headquarters for 53 wholesale companies.

Cultural activities are centered in art and writing groups, libraries, an 80-piece symphony orchestra, and a civic players group. A well-developed educational program embodies progressive methods of child training, while Kalamazoo College, Western State Teachers' College, and Nazareth Academy provide opportunities for higher learning. Paul Osborn, a playwright best known for his *Vinegar Tree*, and Arnold

Mulder, who has portrayed in novels the Dutch of western Michigan, are the most important Kalamazoo authors.

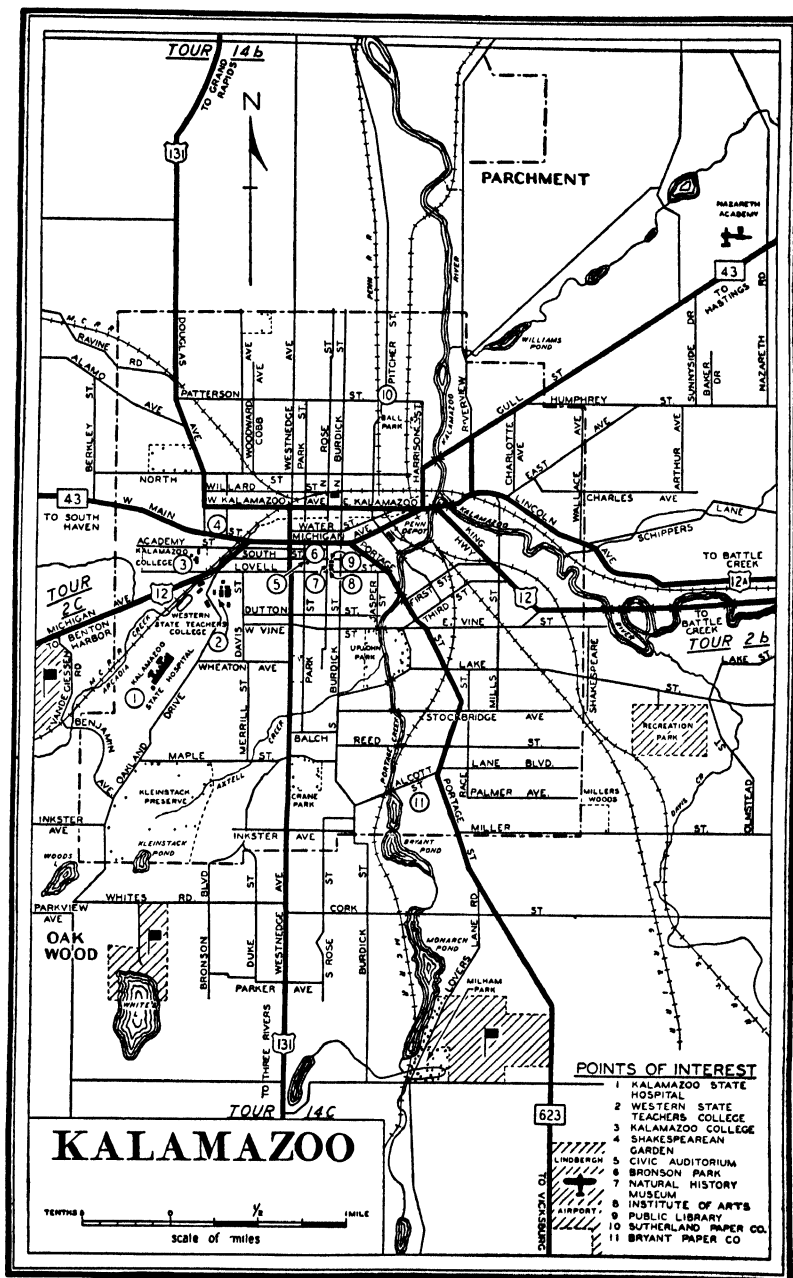
POINTS OF INTEREST

1. The KALAMAZOO STATE HOSPITAL (*open 9-11, 2-4 week-days*), an institution for the mentally ill, extends for a mile along Oakland Drive SW. of Michigan Ave. The 50 buildings accommodate more than 2,500 persons. Up-to-date psychiatric methods are employed, with emphasis on outdoor occupational therapy. The more advanced patients work in the institution's small furniture factory, others do needlework, and some tend the large hospital farm three miles southwest of the main building. Patients have access to all recreational equipment and maintain their own chorus and orchestra. The success of the institution's treatment can be judged by the fact that 30 per cent of all patients are discharged as cured, and a large number are 'paroled' home, sufficiently recovered to resume their former occupations.

2. WESTERN STATE TEACHERS' COLLEGE, Davis St. near Oakland Drive and Lovell St., founded as the Western State Normal School in 1904, is a coeducational institution with an enrollment of more than 2,000. The present name was adopted in 1928 by an act of the State legislature. The 56-acre campus, profusely planted with shrubs and flowers, overlooks the western part of the city. Designed in Classic and Renaissance styles, the hill-top structures, none more than three stories high, include the training school, science, administration, and library buildings. On the lower campus are a thoroughly equipped manual arts building, a recital hall and art studios, a little theater, and a men's gymnasium.

3. KALAMAZOO COLLEGE, on Academy St., 3 blocks W. of Oakland Drive, is one of the oldest colleges in Michigan. Established in 1833 by Thomas W. Merrill, a Baptist missionary, the school was first chartered as the Michigan and Huron Institute. The present average enrollment is 350. Most of the college's seven buildings are in a hardwood grove on College Hill, one block north of Western State Teachers' College. The near-by homes of faculty members are designed to harmonize with the Georgian style of the newer college buildings. The BROLOGY MUSEUM in Bowen Hall (*open 8-12, 1-5 school days*) contains a rock garden, a small greenhouse, flora and fauna exhibits, and an extensive collection of shells.

4. SHAKESPEARIAN GARDEN (*open by permission*), 1012 W. Main St., belongs to Miss Alice McDuffee, who started it after a visit to Shakespeare's birthplace, Stratford-on-Avon. The plots are designed to portray passages from the plays, such as 'When daisies pied and violets blue, and the lady smocks all silvery white, and cuckoo buds of yellow hue, do paint the meadows with delight,' from *Love's Labour's Lost*. The arch to the 'primrose path' symbolizes the roses of Lancaster and York, at length united.



5. The CIVIC AUDITORIUM, Park and South Sts., a limestone structure designed by Aymar Embury II, was built in 1931 and donated to Kalamazoo by Dr. William Upjohn. The severely plain walls are relieved by excellent fenestration and delicate detail. The main auditorium, its warm browns and gold offset by the blue-green velour of the seats and carpets, seats about 600 persons. The building is also equipped with a modern kitchen, dressing rooms, a small library, a rehearsal hall, and a dining room with accommodations for 150. In the latter are murals by Alexander Rindskopf, depicting the development of the American drama. The auditorium is used by the symphony orchestra for practice and by the Kalamazoo Civic Players, who have a ten-month production season.

6. BRONSON PARK, extending for two blocks from Park and South Sts., is the site of the Bronson Village Cemetery and the Michigan and Huron Institute. Chief feature of the tract is an electrically illuminated fountain, bequeathed to Kalamazoo in 1925 by Duncan J. McCall. A bronze tablet on a granite boulder marks the site where Abraham Lincoln made an antislavery address in August 1856; a second boulder with bronze tablet, dedicated by the local chapter of the D.A.R. in 1914, honors Lucinda Hinsdale Stone, educator and philanthropist. The Soldiers' Monument was dedicated in 1924 in memory of those who served in the Spanish-American War, the Philippine Insurrection, and the China Relief Expedition. The destruction of the U.S.S. *Maine* is commemorated by a boulder bearing a tablet cast of metal recovered from the sunken battleship.

7. The NATURAL HISTORY MUSEUM (*open 9-6 weekdays*), 335 S. Rose St., is flanked by the Kalamazoo Public Library and the Institute of Arts. The museum's staff has done notable research on methods of visual education, with emphasis on appeal to children. Among the items displayed are curios, old books, and French paintings comprising the A. M. Todd Collection.

8. The INSTITUTE OF ARTS (*open 9-6 weekdays; 6-9 Mon., Wed., and Fri.*), 347 S. Rose St., occupies a two-story frame structure lent by the Board of Education. Although it operates on a small budget, the institute obtains many representative traveling exhibitions. Its directors stress contemporary art; recent shows have included modern painting, industrial art, and photographic art. The institute sponsors adult classes in painting and sculpture and Saturday morning classes for children.

9. The PUBLIC LIBRARY (*open 9-6 weekdays*), Rose and South Sts., a two-and-a-half-story structure of Romanesque design, was donated to Kalamazoo in 1893 by Dr. and Mrs. E. H. Van Deusen. The exterior is of granite and field stone, with red tile roofing. The Kalamazoo library system circulates more than 100,000 volumes; in addition, it has approximately 30,000 lantern slides, 35,000 museum exhibits, and 400,000 pictures.

The PAPER MILLS, scattered through the eastern section of the city along the banks of the river, house Kalamazoo's most important

industry. These plants manufacture a wide variety of paper products, each requiring slightly varied processes. Although the bulk of the paper is made from wood pulp, other cellulosic materials, such as linen, cotton rags, and straw pulp, are also used. Four processes are employed in wood-pulp manufacture: the sulphite, soda, and sulphate methods use those chemicals as a solvent for the wood; the groundwork process is entirely mechanical.

Wood is prepared in the same manner for all processes. It is cleaned of its bark, chipped into suitable sizes, and treated to produce the type of pulp for the paper desired. After the pulping treatment—a closely guarded secret in many factories—the mixture is run onto a fine mesh wire screen; the resultant layer of pulp is then pressed to remove moisture.

The refined pulp may be treated in several ways to produce paper of different quality. The principle of each treatment, however, is similar. The pulp is bruised and kneaded in a beating machine to separate the fibers, placed on a finely woven wire screen, pressed, dried on a felt belt over steam-heated cylinders, wound on a roll, slit into desired width, and rewound. In the manufacture of paper specialties, such as boxes and cartons, the final treatment may vary considerably.

10. The SUTHERLAND PAPER PLANT (*open weekdays by appointment*), 1322 N. Pitcher St., has two large mills, four stories high, constructed of gray pressed brick. The grounds adjoining the office building are landscaped, and the company maintains two softball diamonds for the use of employees.

11. The BRYANT PAPER PLANT (*open weekdays by appointment*), 2030 Portage St., has two mill and manufacturing buildings of gray brick, each three stories high. The office building is a three-story structure of red pressed brick. Around Bryant Pond, a reservoir that provides power for the mills, the company has carried out extensive landscaping.

POINTS OF INTEREST IN ENVIRONS

Kalamazoo Vegetable Parchment Co., 2.5 m., Milham Park, 4 m. (*see Tour 2*); Wolf Lake Fish Hatchery, 7.5 m. (*see Tour 14*).

Lansing and East Lansing

Railroad Stations: Union Depot, 126 N. East St., near E. Michigan Ave., for Michigan Central R.R. and Pere Marquette Ry.; Grand Trunk Station, 1223 S. Washington Ave., for Grand Trunk Ry.

Bus Station: 118 S. Grand Ave. for Blue Goose, Short Way, Peoples Rapid Transit, Indian Trails, Foster Bus, and Holt-Lansing Lines.

Bridges: Michigan Avenue Bridge, Michigan Ave. between Grand Ave. and Mill St.

Airport: State Airport, 3 miles NW. near US 16, for Pennsylvania Airlines; taxi fare 75¢, time 20 min.

Taxis: 25¢ anywhere in city; 25¢ for every mile or fraction of mile beyond city limits.

City Busses: Service at 15-min. intervals; fare 5¢, transfer 1¢; between Lansing and East Lansing, service at 15-min. intervals; fare 5¢, no transfers.

Traffic Regulations: Parking prohibited on any street from 2 A.M. to 5 A.M.; speed limit 15 m.p.h. in business districts, 25 m.p.h. in residential districts; no left turn (at any time) or U-turn (except from 5 A.M. to 9 A.M.) allowed on Washington Ave. from Washtenaw St. to Ottawa St.; no left turn on Michigan Ave. and Grand Ave. between 4 P.M. and 6 P.M. No turn on red light.

Accommodations: 15 hotels; tourist homes; rooming houses; city tourist camp, E. Michigan Ave. near S. Clippert St.

Information Service: Chamber of Commerce, 202 S. Walnut St.; Auto Club of Michigan, Industrial Bank Bldg.; Information Booth, Michigan and Capitol Ave. (summer only).

Radio Stations: WJIM (1210 kc); WKAR (850 kc); WRDS (1642 kc).

Theaters and Motion Picture Houses: Prudden Auditorium, 212 S. Walnut St., West Junior High School Auditorium, 400 block of S. Chestnut St., Lansing Eastern High Auditorium, Pennsylvania Ave. and Jerome St., civic meetings, concerts, stage production, etc.; 7 motion picture houses.

Swimming: Municipal Outdoor Pool, Moore's Park, 420 Moore's River Drive, W. of Washington Ave., fee 25¢.

Golf: Glenmore Golf Course, E. Michigan Ave., 9 holes, greens fee, 25¢; Groesbeck Municipal Golf Course, E. Grand River Ave., 18 holes, greens fee, 50¢; Indian Hills, Okemos, 9 holes, greens fee, 25¢; Red Cedar Golf Course, E. Michigan Ave., 9 holes, greens fee, 25¢; Sycamore Municipal Golf Course, E. Mt. Hope Ave., 9 holes, greens fee, 20¢; Touraine Golf Course, E. Grand River Ave., 9 holes, greens fees, 15¢ weekdays, 25¢ Sun.

Tennis: Ranney Park, E. Michigan Ave. near city limits; Potter Park, 1301 S. Pennsylvania Ave.; Moore's Park, 420 Moore's River Drive; Oak Park, 704 E. Saginaw St.; Reasoner Park, 1725 N. Capitol Ave.; Rose Court, 1100 block Rose Court; Scott Park (children only), 200 block W. Elm St.

Riding: Michigan Farms, S. Harrison Road, horses rented on monthly basis only.

Annual Events: Farmers' Week, Michigan State College of Agriculture and Applied Science, Jan.-Feb. (East Lansing); City playground parade, mid-summer; city playground play, late summer (both in Lansing).

LANSING (843 alt., 78,397 pop.), on the Grand River at the mouth of the Red Cedar, is the parent city of East Lansing (840 alt., 4,389 pop.). East Lansing, although politically a separate entity, appears to be a part of Lansing proper. Capital of Michigan, Lansing is an important automobile manufacturing center and the trading mart for the lower Michigan farming area. Thus the political activity of a State capital, the rumbling tempo of an industrial city, and the even temper of a farming community are curiously blended. East Lansing bans industry and its activities are centered around the Michigan State College of Agriculture and Applied Science.

Dominant on the Lansing skyline are the State capitol and the neighboring 25-story Olds Tower, named for the automobile manufacturer. By night, a battery of lights floods the capitol dome, and a neon-lighted clock marks the tower. These two distinctive structures, identifying the city, loom above the sloping plateau in sharp contrast, one epitomizing the Victorian period and the other expressive of the present. Rolling hills surround Lansing and cup it in a shallow bowl. The lazy Grand, the Red Cedar, and the Sycamore Rivers, spanned by numerous bridges, twist across the city. The Red Cedar from the east and the Sycamore from the south flow together and are joined, in midtown, by the Grand from the west. The winding course of these rivers passes within two blocks of the State capitol, near the main business district, into Lansing's tree-lined residential section, and then meanders through miles of rich farm lands.

During legislative sessions, Lansing assumes a metropolitan tone. Hotel lobbies near the capitol and crowded cafés and restaurants hum with conversation that has politics for a general theme. Only rarely have labor problems intruded into the legislative scene. In 1935, workers filled the legislative chambers in protest against a bill unpopular with them, the provisions of which were subsequently modified. In the spring of 1937 union leaders called a 'labor holiday,' and men in overalls massed in the streets and closed the shops.

The outstanding difference between East Lansing and other towns of comparable size is the total absence of a low-income residential neighborhood. The business section is three blocks long and lies, principally, along East Grand River Avenue, directly opposite the campus. Students form the greater part of the buying public; residents find Lansing a better shopping center.

Lansing was developed by a legislative prank. Until 1847, Detroit was Michigan's capital. The constitution of 1835 provided that the capital 'shall be at Detroit . . . until 1847, when it shall be permanently located by the legislature.' The legislators, after two of their number had been burned in effigy by a gang of rowdies, concluded that Detroit, being on the border, was in danger of a foreign invasion and were glad enough to abide by the constitution. Where to go was a problem. For months the legislature wrangled, as every settlement in lower Michigan was considered. When, in light humor, 'the township of Lansing' was suggested, the impasse was relieved amid laughs, and,

for want of a better solution, the seat of government was moved to a wilderness location that had but one log house and a sawmill.

The township's few families had migrated from the East, after two timber cruisers sold them lots in a 'city' existing only on paper. Most of them came from the village of Lansing, New York, and, although their illusions were shattered when they arrived at the junction of the Grand and Red Cedar Rivers, some decided to remain. They called the settlement after their home village, named for Chancellor John Lansing of New York. The new 'capital of the woods' was to have been named Michigan or Michigamme, but Lansing was retained when the legislature again became bogged in tedious argument.

Spurred by the unexpected twist of events, Lansing grew rapidly. Stores, a large hotel, and a structure intended for a warehouse were built immediately. The warehouse, however, was turned into a church, irreverently referred to as 'God's barn.' By December 1847, the forest had been cleared sufficiently to erect the new frame capitol. Town builders, adventurers, State officials, contractors, masons, carpenters, woodsmen, grocers, tavern keepers, and liquor vendors concentrated in an area of the upstart village where Main Street and Washington Avenue now meet. These thoroughfares were then but lanes of stumps. Slab 'palaces' shot up, and goods poured in to be sold. Two potteries, a foundry, a carding mill, and a cooperage were established within a few years. In 1854, the capitol was replaced by a brick structure.

After the first feverish growth following the acquisition of the capitol, Lansing settled down to earning a living, for prosperity did not come easily to this isolated community. The struggle for existence was matched only by the struggle for education. Coming from the East, many of the pioneers possessed a cultural background, and formal education began in the district as early as 1847, in a rough board shanty. Summer sessions were held under the trees on the banks of the Grand River. The first agricultural college in the United States was authorized by the State in 1855 and opened in 1857 at what is now East Lansing, under the name of Michigan Agricultural College. The Michigan Female College, founded in 1855 by two spinster sisters, was attended by approximately 1,000 young women during its existence; it was discontinued in June 1869, upon the death of one of the sisters.

The first settler on territory within the present limits of East Lansing was D. Robert Burcham, who in 1849 bought much of the land comprising the present city, the campus of the State College of Agriculture, and the village of Okemos. Joel Harrison built the first rooming house for students, after the college had been established at the southwest corner of Michigan and Harrison Avenues. Until 1895, community life was confined entirely to residents of the campus. In 1898, new homes were built near the college, and in the following year the first off-campus boarding house was opened.

The temperance movement in East Lansing was evident even in the 1890's, for incorporated into every deed of many of the subdivisions

was a clause prohibiting the sale of intoxicating liquors on the premises. The same restriction persists today; 'sale of liquor by the glass within the city limits in private incorporated or recognized clubs. Liquor may be purchased, however, by the bottle or package at State liquor stores, or special designated distributors.'

On May 8, 1907, when the legislature granted East Lansing a city charter, it was the smallest city in the State. Several names were suggested for the place, College Park being favored by the residents, but the Post Office Department settled the matter by designating the city East Lansing, since all mail was routed through the Lansing Post Office.

Newspapers came into existence shortly after Lansing became the capital. The *Lansing Free Press* appeared in January 1848; the name was later changed to the *Michigan State Journal* and then to the *Lansing Journal*. In 1855, the *Lansing State Republican* was founded. The two papers, politically opposed, lambasted each other, engaging in the rough-and-tumble journalism of an era when publishers frankly personalized the news. They were merged in 1911, however, as the *Lansing State Journal*, now the city's only daily paper.

By 1859, when Lansing was finally incorporated as a city, the population numbered 4,000. Lack of good transportation and the insecurity of the capital—Lansing citizens lived in fear that the honor would be revoked as suddenly as it had been bestowed—prevented the development of industry until 1871. But in that year railroads connected the city with the rest of the State, and the legislature allotted \$1,200,000 for the erection of a new capitol, which was completed at a slightly higher cost in 1878.

When the gasoline engine and the automobile were made commercially practical in the latter part of the nineteenth century, the city had three or four large carriage and wagon factories and a wheel company, which were converted into automobile body and wheel factories. An important factor in Lansing's industrial development was the ability to finance the 'radical' proposals of automobile inventors. Six or eight local men had accumulated large fortunes by developing the surrounding country and selling dense timber stands, and, when the timber gave out, they were interested in new business ventures.

Lansing's industrial importance really began with the rise of Ransom E. Olds (b.1864), one of America's foremost automobile pioneers. Credited with constructing the world's first practical automobile, Olds's name is still carried by the Oldsmobile car, while the Reo bears his initials. In the early 1900's, Olds was the world's largest car producer. So nationally prominent was his car that in the public mind 'Oldsmobile' and automobile were nearly synonymous. Songs were written in his honor, the favorite being 'In My Merry Oldsmobile,' by Gus Edwards.

Gasoline engines and automobiles made Lansing a manufacturing and trading center. More than 200 manufacturers established themselves in the area. In 1904, Lansing was a world leader in the produc-

tion of agricultural implements, automobiles, and gasoline engines, and held second place in the manufacture of wheelbarrows, trucks, and store fixtures. The industrial age inaugurated an era of unprecedented expansion. The population increased from 16,000 in 1900 to 32,000 in 1910. The continued success of the automobile brought thousands to the city, and the increasing functions of the State government added many white-collar workers. By 1930, almost 80,000 people resided here.

Today, Lansing produces hundreds of products, including automobiles, all types of auto accessories, trucks, agricultural implements, awnings and tents, chemicals, display fixtures, tools, dies, boilers, gas engines, concrete mixers, road culverts, rubber stamps, rugs, hand trucks, warehouse tractors and trailers, beet sugar, and wheelbarrows. The city's 101 industries provide employment for an average of 18,000 men and women, and additional thousands find permanent and temporary positions with the State government agencies.

The presence of the Michigan State College in East Lansing has made Lansing known culturally. The college's Music Department and other local conservatories attract students from numerous States. The 70-piece Lansing Symphony Orchestra performs many times during the winter, and well-known artists stop here on their concert tours. The Teachers' Civic Choir, the Orpheus Club, and the Matinee Musicale are other important musical organizations. Dramatic entertainment is furnished by the Civic Players Guild.

LANSING POINTS OF INTEREST

1. CENTRAL PARK, Capitol Ave. and Kalamazoo St., 3 acres in area, is beautifully wooded with elms and maples. Originally known as the Third Ward Park, it was given to the city by the State in 1878. The Reutter Memorial Fountain, costing \$25,000, was donated in 1929 by former Mayor J. G. Reutter in memory of his wife. Octagonal in form, it is composed of a large number of vertical fountains, which alternate in a series of sprays. Every day in summer, from dusk until 11 P.M., the sprays of the fountain are varied and played upon by a color organ.

2. The STATE OFFICE BUILDING (*open always*), 316 S. Walnut St., a seven-story stone structure of neoclassic style, was designed by Bowd-Munson of Lansing, with Albert Kahn of Detroit as consultant. Erected between 1920 and 1922 to house State departments, the building has approximately 180,000 square feet of floor space. In the north wing is the STATE LIBRARY (*open 8-6 Mon.-Fri., 8-4 Sat.*), which, combined with the Law Library in the capitol, contains more than 300,000 volumes, including a noted collection of Michigan authors and works pertaining to the State, an Art Library, and complete files of a number of periodicals. Their extension service reaches every county in Michigan and places numerous books in schools and other institutions.

The first floor of the south wing contains the STATE PIONEER MUSEUM (*open 8-12, 1-5 Mon.-Fri.*), begun in 1828, reorganized in 1874,

and placed under the supervision of the Michigan Historical Society in 1913. It has an extensive collection of Indian relics including implements and ornaments of stone, clay, and copper. The pioneer relics include mulberry and majolica wares, pictures made of seeds and kernels of corn, spinning wheels, walnut and cherry furniture, percussion guns, tar buckets, piggins (wooden pails), cradle scythes, and numerous iron and pottery lamps and lanterns.

3. The LANSING CHAMBER OF COMMERCE, 202 S. Walnut St., is housed in a two-story brick structure, built in 1860 and occupied in earlier years by an academy and boarding school. The building was subsequently acquired by William K. Prudden, a manufacturer, who gave it and the adjoining Prudden Auditorium to the city in 1917.

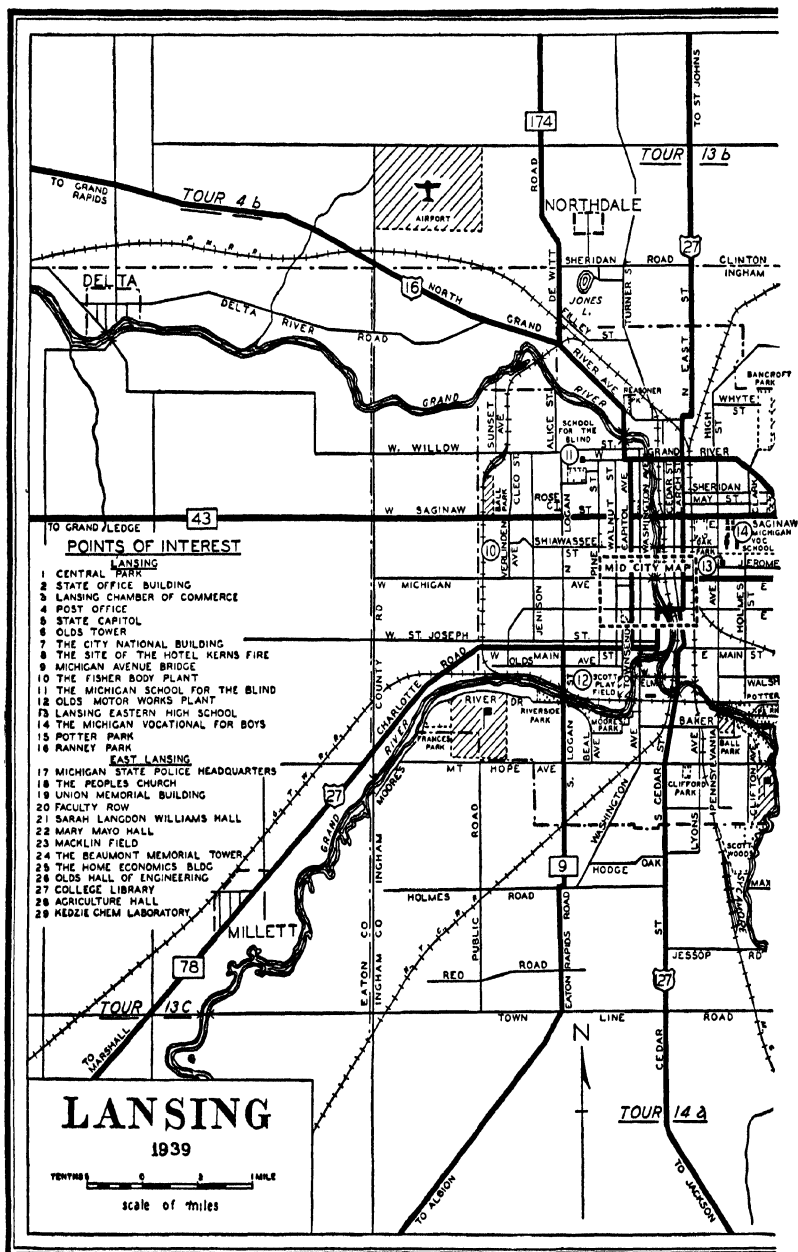
4. The POST OFFICE, W. Allegan St. between S. Walnut and Townsend Sts., an excellent example of modern civic architecture, is built of Minnesota dolomite and decorated with marble. It was completed in 1933.

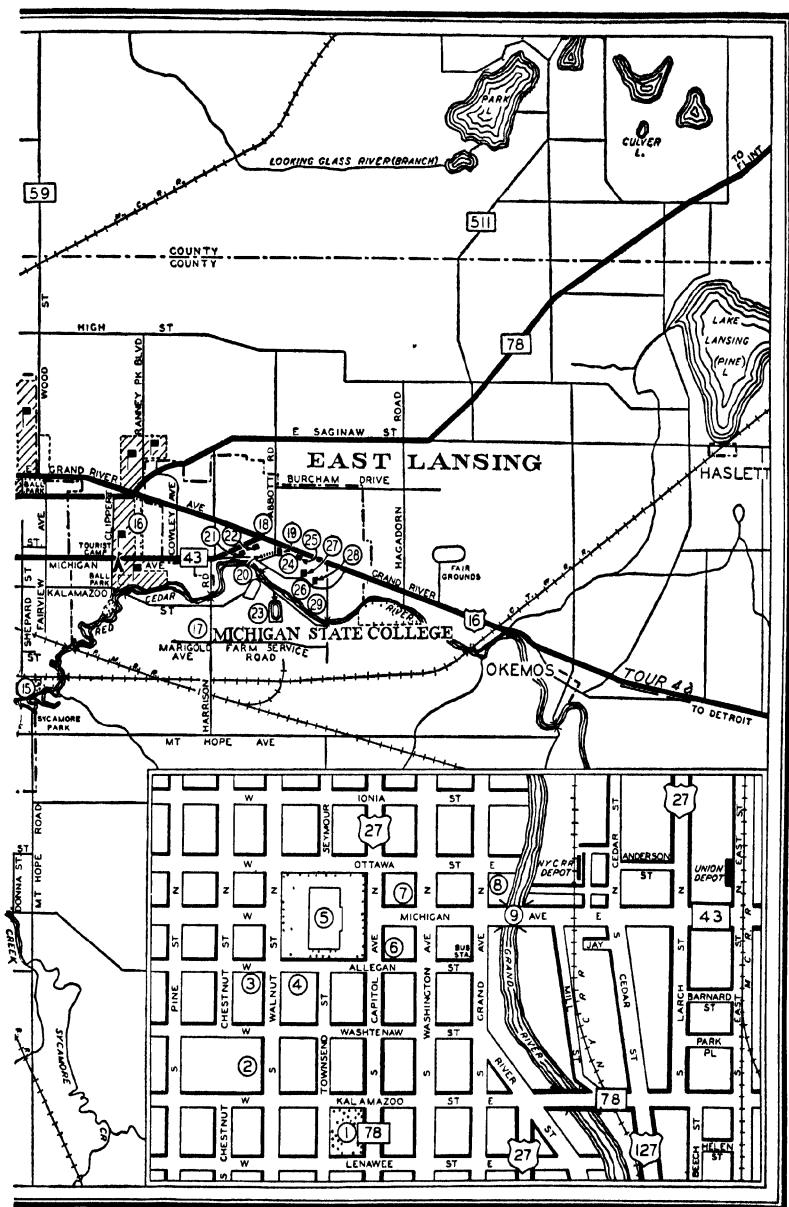
5. The STATE CAPITOL (*open 8-5 Mon.-Fri., 8-12 Sat.; first floor only open 8 A.M.-12 P.M. daily*), Capitol Ave. between Allegan and Ottawa Sts., occupies a slight elevation among beautiful elm and chestnut trees, on grounds covering four city blocks adjacent to the business center. Surmounted by a slight but lofty dome, the building for many years gave the traveler his first glimpse of Lansing, although it is now topped by the Olds Tower. Of late Classic Renaissance design, the white sandstone structure was completed in 1878 at a cost of \$1,510,130. Four stories high, with a cruciform ground plan, it is 420 feet long, 273 feet deep, and 267 feet high. The rotunda, extending 150 feet from floor to diaphragm, is flanked by two grand stairways, which lead from the basement to the fourth floor. The architect was Elijah E. Myers of Springfield, Illinois, whose design was selected from among 20 submitted by architects throughout the country.

Besides housing the two legislative chambers and the governor's office, the capitol accommodates the offices of the secretary of state, treasurer, auditor general, superintendent of public instruction, attorney general, State board of auditors, superintendent of the capitol, and is the seat of the State supreme court.

The top of the dome is visible from the main lobby, and each floor has a balcony that provides views of the scene below and the dome above. On the second floor are the governor's office and the chambers of the senate and the house. The approach to the senate and the house galleries is from the third floor; visitors are admitted during sessions. In the basement corridors is a WAR RELIC MUSEUM (*open 8-5 Mon.-Fri., 8-12 Sat.*), which includes Civil, Spanish-American, and World War battle flags of Michigan troops and a miscellaneous display of historical relics. The building also contains the law library of the State.

An allegorical representation of Michigan's growth and development, carved in bas relief from the sandstone material of the structure, decorates the main pediment in the center of the eastern entrance to the building. The central female figure, with a world globe and a book,





represents the affairs of State; Michigan's shipping and lumbering industries are symbolized by a ship's anchor, a felled log, an ax, and a pile of lumber, disposed about a second figure; the third figure, with a background of plow handles and mining tools, signifies agriculture and mining.

The capitol grounds are attractively landscaped. On the sloping banks of the north side is a rock garden, with waterfalls and a pool. In front of the building, midway from the street, stands Edwin C. Potter's STATUE OF AUSTIN BLAIR, Michigan's Civil War governor. In the southeast and northeast corners of the grounds are memorials to veterans of the Civil and Spanish-American Wars.

6. The OLDS TOWER (*open always; trips to the top by permission of the building manager*), 124 W. Allegan St., modern and efficient, symbolizes a new era in Lansing history. Built in 1931, the 25-story brick and stone tower, 345 feet high, is named for Ransom E. Olds. The architects were Hopkins and Dentz of New York. In design, the tower is a typical American skyscraper, tall and narrow, with a spire and beacon. A bank occupies the main floor, two mezzanines, the second floor, and a portion of the basement. The remainder of the building contains offices. Four engraved panels on the main-floor portals of the three passenger elevators depict the agricultural laborer, the shop artisan, the 'horseless carriage,' and locomotive and airplane transportation.

7. The CITY NATIONAL BUILDING, NW. corner Michigan and Washington Aves., an imposing modern office structure of grayish-white stone, was designed by Black and Black of Lansing. Exquisite grilles protect and decorate the lower windows. The panels of the sliding bronze doors bear bas reliefs depicting Lansing's progress. In addition to a bank and business offices, the building also houses Radio Station WJIM.

8. The SITE OF THE HOTEL KERNS FIRE, 112-120 N. Grand Ave., is now a parking lot. The old Hotel Kerns was destroyed in December 1934, and more than a score of people, including a number of legislators, lost their lives. During the disaster, several guests who were trapped in their rooms jumped from the windows into the Grand River that flowed below.

9. The MICHIGAN AVENUE BRIDGE, Michigan Ave. between Grand Ave. and Mill St., was considered an unusual accomplishment when constructed in 1894, because it was as wide as the street, 108 feet. Less than 100 feet long, the bridge is a single span of concrete. In 1935, it was reinforced and repaved by the WPA, the first project in the State to be completed.

10. The FISHER BODY PLANT (*not open*), Verlinden Ave. between W. Saginaw St. and W. Michigan Ave., occupies 48 acres of ground. The two main buildings, connected so that they appear to be one, are two stories high and three blocks long. The factory unit of 18 buildings, originally built for the Durant Motor Company, was occupied by the Fisher Body Corporation in 1935. Fisher bodies are trucked to

the Olds Plant, on a highway built in 1936, under the joint sponsorship of the city and the Fisher Corporation.

11. The MICHIGAN SCHOOL FOR THE BLIND (*open by permission*), W. Grand River Ave. and N. Pine St., is pleasantly situated on high sloping grounds amid hundreds of trees. The school accommodates more than 200 students and offers a 12-year course in literary, musical, and industrial arts, for blind students between the ages of 7 and 19. Opened in 1880 in a building formerly used by the Michigan Female College, the institution is free to every child in the State whose eyesight does not permit attendance at public schools. Additions have been made so that the main building now includes offices, dormitories, a chapel seating 400, a general dining room, and a kitchen in the basement. The school has a Braille library of 10,000 volumes and a print shop where a monthly magazine is printed in Braille. Basketball and football games with outside teams are played weekly during the season.

12. The OLDS MOTOR WORKS PLANT (*open by permission; tours*), Townsend St., and Olds Ave., three-quarters of a mile long, is the city's largest industrial enterprise, with 26 buildings covering 87 acres. The ADMINISTRATION BUILDING, approached from W. Elm St., a three-and-a-half-story cream brick structure trimmed with white stone, was designed by Albert Kahn of Detroit and built in 1930.

Ransom E. Olds built the first three-wheeled horseless carriage in 1887, brought out a practical four-wheeled auto in 1893, and produced a gasoline type in 1896. In 1897, Olds and Frank Clark, a young carriage maker, formed a company at Lansing and produced their first Oldsmobile, but the car was considered impractical. Later Olds went to Detroit and, in 1899, formed the Olds Motor Works, financed by S. L. Smith, the copper baron. The company brought out the curved-dash Oldsmobile runabout, a car that paved the way for the automobile industry, long before the present big auto manufacturers had started their plants. In 1901, Olds produced 425 cars. In 1902, part of the Detroit plant was destroyed by fire, and a supplementary plant was constructed at Lansing. Olds sold his interest in the Olds Motor Works in 1903 to found the Reo Company a year later, but the manufacture of Oldsmobiles went on. In 1904, production had increased to more than 5,000 cars. The Detroit plant was abandoned in 1905, and the factory was moved to Lansing. In 1910, the Oldsmobile became affiliated with the General Motors Corporation and reached a high position in the American motorcar market. Oldsmobile production increased sevenfold between 1932 and 1936.

13. LANSING EASTERN HIGH SCHOOL, 222 N. Pennsylvania Ave., a brick and limestone structure of conservative modern collegiate style, was designed by Pond, Pond, and Martin, of Chicago, and completed in 1928. The school building proper is L-shaped, being one block long on either arm, with large shade trees to enhance the setting. The auditorium, seating 1,600 people, is used for lectures, dance recitals, and the concerts of the Lansing Symphony Orchestra.

14. The MICHIGAN VOCATIONAL SCHOOL FOR BOYS (*open by appointment*), N. Pennsylvania Ave. and E. Shiawassee St., was established in 1855. Although primarily a detentive institution, it has the appearance of a small, well-organized farm. The honor system prevails, and not a window is barred. The school is built on a 270-acre tract, partly farmed by the students. An average of 500 boys are accommodated in 21 cottages, each one under the direction of a manager and his wife. Originally established as a reform school, the institution has been converted into a modern vocational school, where education and training are given in fields and shops. All meals are served in the cottages. Other buildings on the grounds are the school and auditorium, machine and manual-training shops, a hospital, and a field house with gymnasium facilities.

15. POTTER PARK, 1301 S. Pennsylvania Ave., on the Red Cedar River, more than 100 acres in area, is the largest park in Lansing. Most of the land was donated by James W. Potter in 1913. Beautifully wooded, the park is popular for walks, drives, and picnics. It contains a Zoo (*open 10-5 daily*), provided with two buildings housing more than 200 animals. Recreation facilities include a children's playground, three concrete tennis courts, tables, benches, and ovens. A large pavilion is sometimes used for band concerts.

16. RANNEY PARK, E. Michigan Ave. between Lansing and East Lansing, a 20-acre tract donated to the city by George E. Ranney in 1917, has an illuminated softball diamond and bleachers, nine concrete tennis courts, parking space for automobiles, and a pavilion equipped with a public address system.

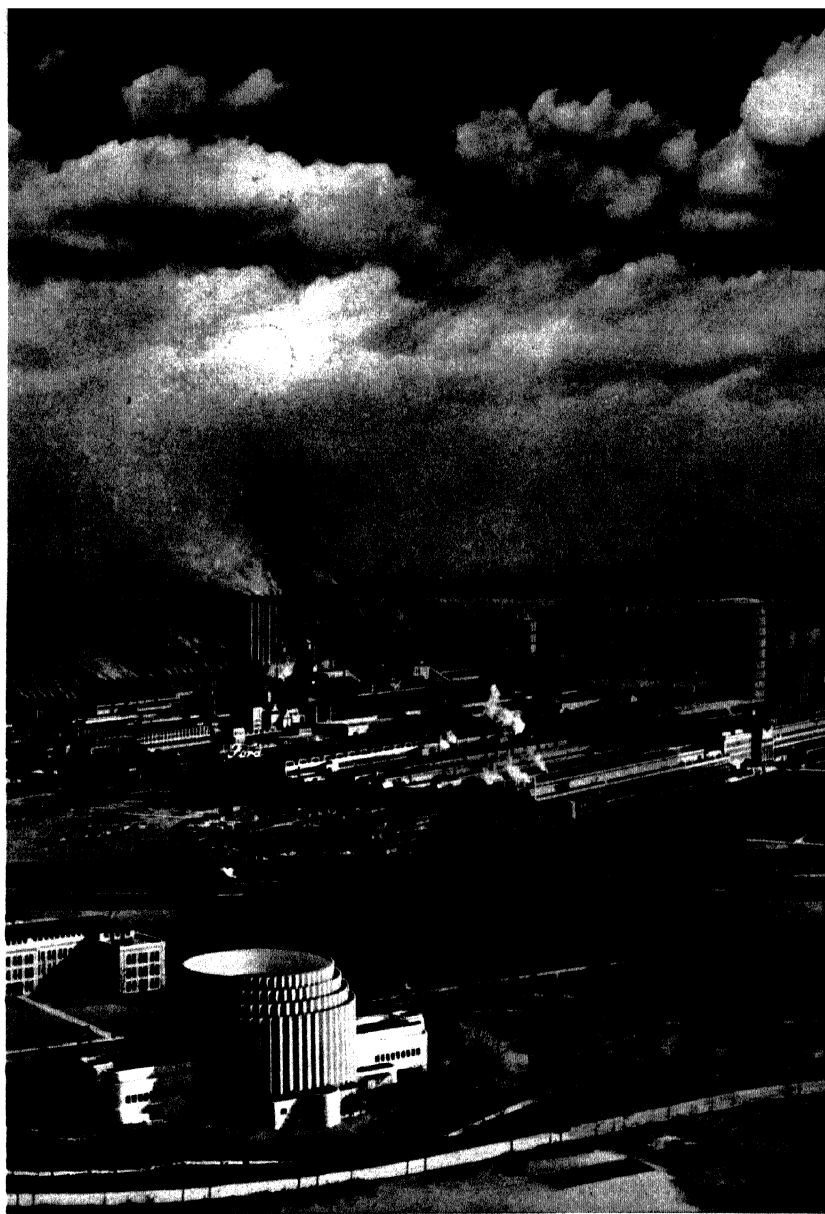
EAST LANSING POINTS OF INTEREST

17. MICHIGAN STATE POLICE HEADQUARTERS (*open 8-5 daily; tours*), Harrison Road at Marigold Ave., is the central unit of the Michigan State Police system, one of the most prominent organizations of its kind in the United States. On the grounds are four red brick buildings: the three-story administration buildings, housing offices and laboratories; Mapes Hall, the men's barracks, which contains the Uniform Division and the Safety and Traffic Divisions; a garage for scout cars and motorcycles; and the radio station, containing equipment for the State Police broadcasting station WRDS, which includes a code transmitter.

In the administration building, erected in 1932, are the Commissioner's office, the identification bureau, the detective bureau, the crime-detection laboratory, the record bureau, business administration offices, and the canteen. The fingerprint section of the bureau of criminal identification has more than a million fingerprint records on file—a collection second only to that of the Federal Bureau of Identification at Washington, D. C. There is also a civilian division of the identification bureau.

The Michigan State Police system was organized in 1917 as the

The Automobile Industry



Photograph by courtesy of Ford Motor Company

AUTOMOBILE PLANT



Photograph by courtesy of Chrysler Corporation

MASTER LAYOUT BOARD IN AN AUTOMOBILE FACTORY

Plant operation is indicated on this chart before which executives are conferring with the plant engineer.



Photograph by courtesy of Chrysler Corporation

NERVE CENTER

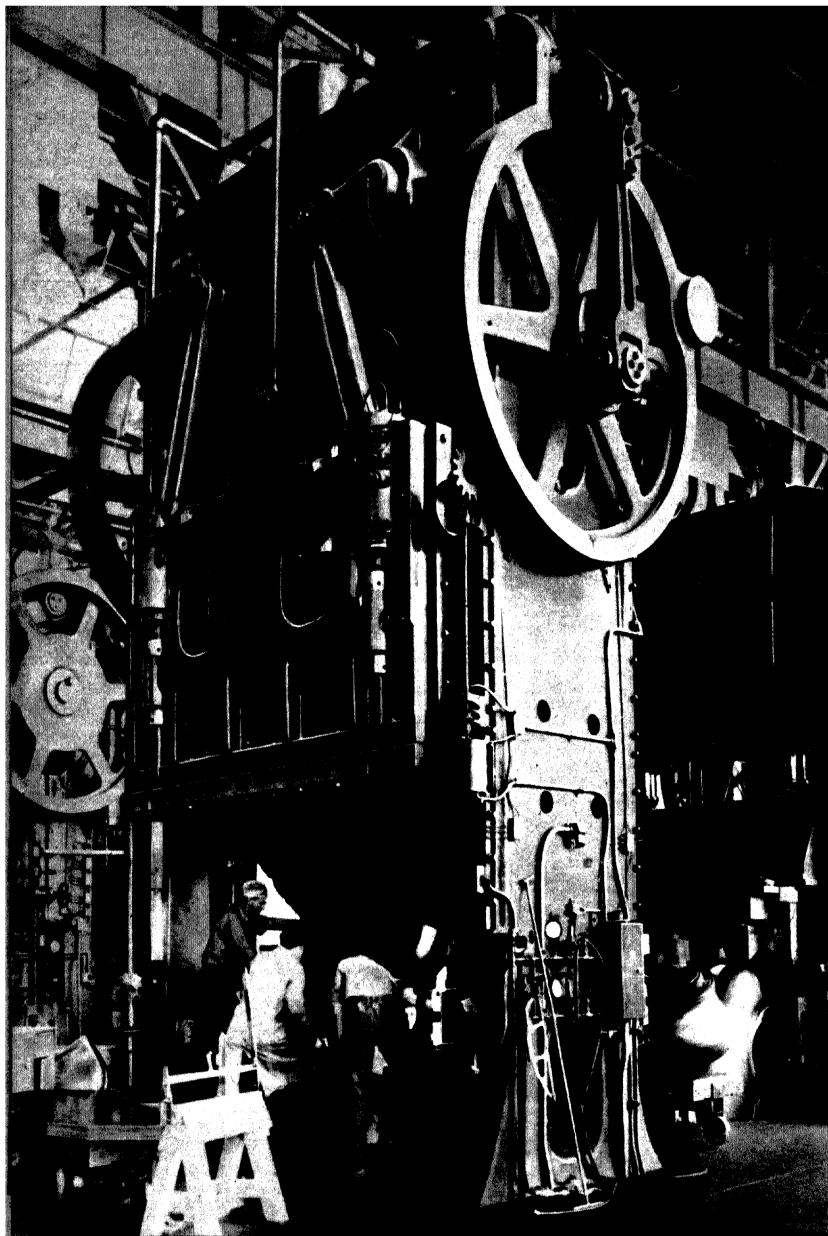
From this office issue the telautograph orders and 'track sheets' that control the flow of parts and materials up to the assembly line.

PLANNING A NEW CAR

An engineers' conference decides upon the lines of next season's model.

Photograph by courtesy of General Motors Corporation





Photograph by courtesy of Chrysler Corporation

FENDER STAMPING PRESS

This giant double crank toggle is capable of exerting 1,250,000 pounds of pressure.



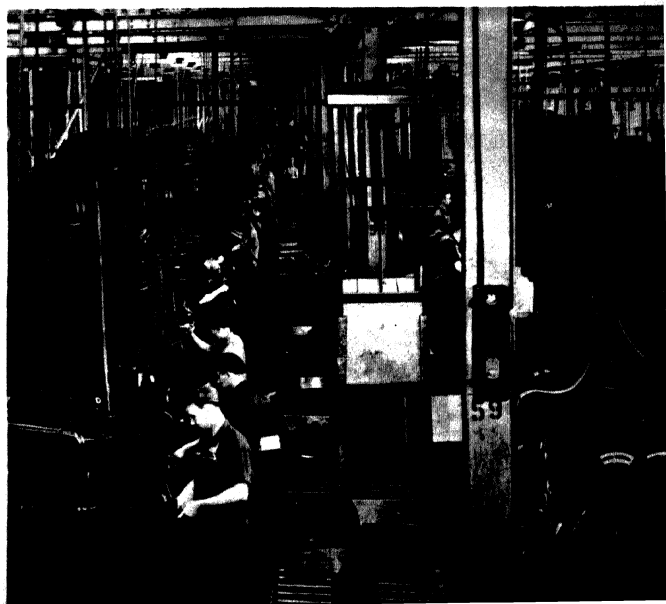
ASSEMBLING DRIVE SHAFT UNITS ON STRAIGHT LINE CONVEYOR

Parts, moving in procession, are joined together until finally a car is completed.

MACHINE LINE

Automatic machines, each producing the same part to the same measurement, account for much of the industry's high production. Note the roller conveyors on which the tin pans filled with parts are shoved along.

Photograph by courtesy of Chrysler Corporation





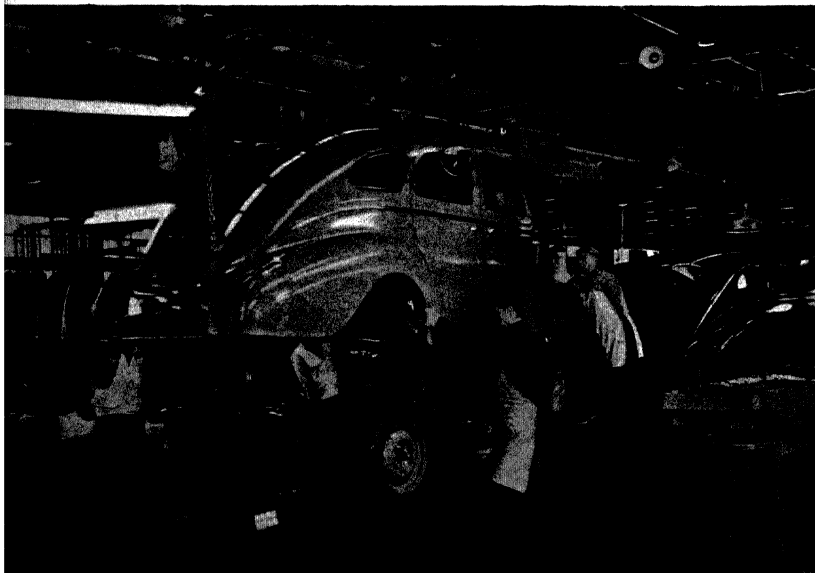
STAMPING ONE-PIECE TOP

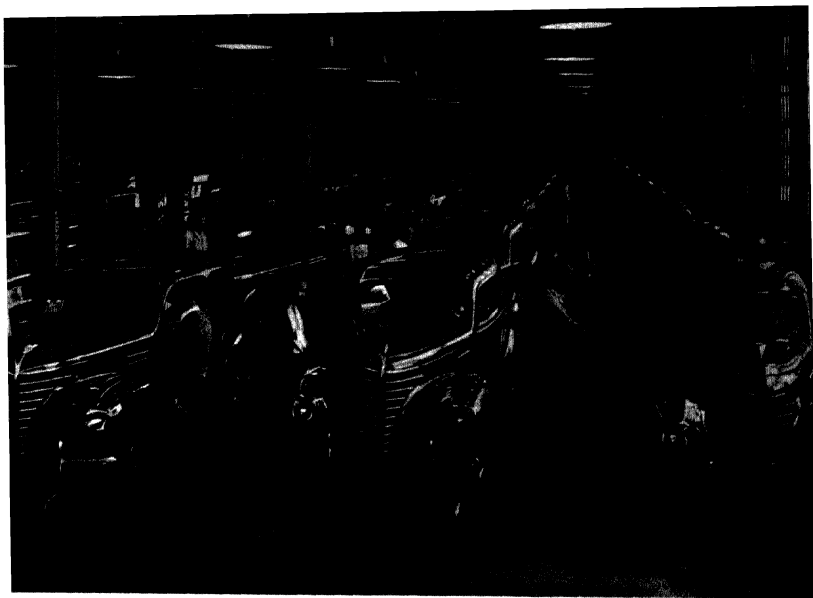
Photograph by courtesy of Chrysler Corporation

DOWN SHE COMES!

While careful hands direct the body to its rubber insulated bolts, a worker is busy in the pit below. The conveyor keeps moving.

Photograph by courtesy of Chrysler Corporation





Photograph by courtesy of Chrysler Corporation

OKAY! DRIVE IT AWAY

As the final inspector puts his approval on the new car, it leaves the assembly line under its own power.

THE 'TORTURE TRACK'

Cars are tested on proving grounds such as these.

Photograph by courtesy of General Motors Corporation



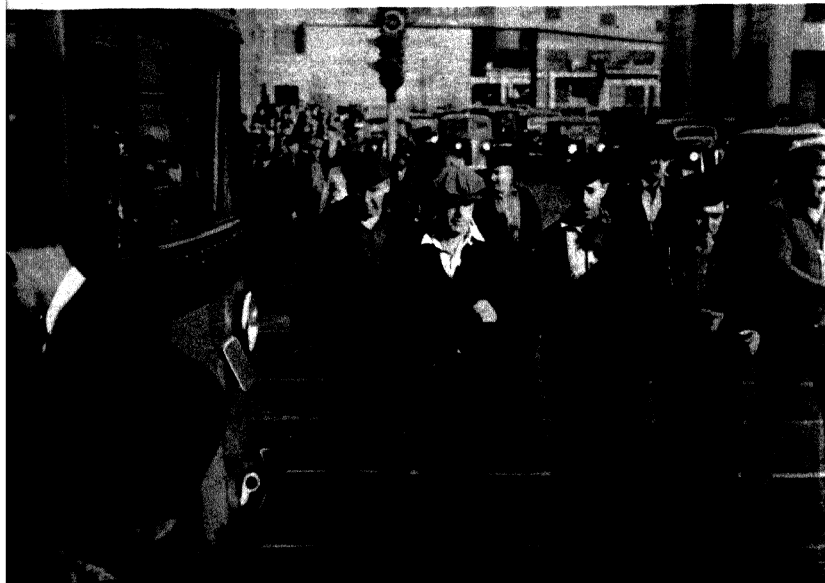


WORKMEN CROSSING THE FORD OVERPASS

Photograph by courtesy of U. S. Film Service

WORKMEN LEAVING PLANT AT END OF DAY'S WORK

Photograph by courtesy of U. S. Film Service



Michigan State Troops, to guard mines, locks, railroad centers, and chemical plants during the World War. The thoroughness with which the troops performed their duties led the State legislature of 1919 to create the Michigan State Police, charged with policing rural communities and assisting local officers in law enforcement. Since that time, the story of the State Police system in Michigan has been one of steady expansion and increasing responsibilities.

Between 1936 and 1938, the Works Progress Administration cooperated with the State of Michigan in a \$1,000,000 building program to construct 27 new posts in Michigan, making the Michigan State Police the best-housed organization of its type in the Nation. Their major duties are of a general police nature, with jurisdiction limited only by State boundaries. Troopers have full police authority, vested in them by the State legislature and the governor.

A part of the WPA building program was the erection of two supplemental broadcasting stations, WRDP at Paw Paw (1936) and WRDH at Houghton Lake (1937), designed to eliminate a radio phenomenon known as 'dark spots,' which interfered with clear reception of WRDS broadcasts. By rebroadcasting through these sub-stations, WRDS now reaches scout cars in every section of the State.

18. The PEOPLE'S CHURCH, E. Grand River and Michigan Aves., housing an interdenominational society organized in 1920, was dedicated 'for the common purpose of ministering to the religious needs of the student body of Michigan State College.' The four founding denominations have been joined by 25 others. Financial aid from 108 Michigan cities and 17 States made possible the building of the church, a three-story edifice of buff brick and Indiana limestone, erected in 1923. It serves as a religious and social center for the entire community. W. E. N. Hunter of Detroit was the architect. The main auditorium, seating 1,250, and a smaller one are on the first floor. Parlors for men and women students are on the second floor. The third floor is used for church and school purposes and as a meeting place for various organizations. In the basement are the student employment bureau, gymnasium, banquet hall seating 500, and kitchen.

The MICHIGAN STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE, first institution of its kind in the United States, is in a peaceful campus setting along the winding Red Cedar River, with its main entrance at Abbot Street and Grand River Avenue. The legislature authorized the institution in 1855; two years later the Michigan Agricultural College was dedicated, its three buildings surrounded by logs and stumps, carpenters' and masons' debris, and other rubbish. All students were required to labor several hours a day to clear the campus, and, for the next few winters, wood chopping was the principal work. A small remuneration served to pay the student's way through college. The first years were filled with hardship, disappointment, and uncertainty, as both the University of Michigan and Michigan State Normal College sought to annex the infant school. But the college surmounted its difficulties so ably that it was soon recog-

nized as a working model for all other agricultural colleges in the country. Although founded primarily for instruction in farming, Michigan State has developed a music department that is noted for its talented faculty. Such prominent artists as Lewis Richards, Arthur Farwell, Phillip Abbas, Alexander Schuster, Michael Press, Louis Graveure, Elizabeth Humphrey, and Fred Patton have been faculty members.

The college sponsors an annual Farmers' Week, held the last week in January or the first week in February. The program is designed to correlate the activities of the college and the many State agricultural organizations for rural improvement, and to facilitate an exchange of ideas among the State's farmers. Daily meetings, lectures, and discussions are presided over by college instructors and specialists. Evenings are given over to band concerts, a livestock parade, and social affairs.

The beautiful 160-acre campus stretches over rolling landscaped terrain, with green lawns, winding paths, and charming vistas. Including the adjacent college farms, the grounds cover a total of 2,300 acres.

CAMPUS TOUR

The following points of interest are listed according to their location with respect to the main entrance at Abbot St and Grand River Ave. Unless otherwise noted, buildings are open during school hours.

19. The UNION MEMORIAL BUILDING (*open 7 A.M.—11 P.M. weekdays, 8 A.M.—11 P.M. Sun. during school year; 8 A.M.—10 P.M. daily during summer*), on the left of the entrance boulevard, is a four-story collegiate-style structure that serves as a social center. It was designed by Pond, Pond, and Martin, of Chicago, and built in 1926 as a memorial to Michigan State students killed in the World War. Remodeled and completed in 1937, it contains a billiard room, two lounges, conference rooms, a ballroom, faculty clubrooms, a banquet room, and a cafeteria in the basement in which meals are served to the general public and the student body. The Union Annex provides quarters for the Art Department and for student publications.

20. FACULTY ROW, R. on drive from entrance boulevard, is a group of eight old houses, two of which date from 1857. Included in the group are three home economics practice houses, a home economics nursery school, and the residences of the dean of women and the president of the college.

21. SARAH LANGDON WILLIAMS HALL, a brick and stone structure of conservative modern collegiate style, was completed in September 1937. It has accommodations for 260 women students. One arm of the U-shaped hall lies along E. Michigan Avenue and the other faces the campus drive and Red Cedar River. On the Michigan Avenue side is an elaborate field-stone entrance. The court side, facing the campus, shelters a formal English terrace and garden. The expanse of glass in the bay that extends from one arm to the other gives the

court the appearance of a spacious sunroom. This building and Mayo Hall were designed by Malcomson, Calder and Hammond, Inc.

22. MARY MAYO HALL, a women's dormitory erected in 1931 fronts Campus Drive. English Tudor in design, it is faced with varicolored brick, shaded from light red to buff. A well-proportioned bay on each end of the wings is veneered with buff Indiana limestone. Built in the shape of a capital I, the hall has 121 rooms and accommodates 250 students.

23. MACKLIN FIELD, across the Red Cedar River, was constructed in 1923 at a cost of \$160,000 and enlarged in 1936 through a WPA grant of \$115,000. It seats 27,000.

24. BEAUMONT MEMORIAL TOWER, just north of the Library, the gift of Mr. and Mrs. John Beaumont in memory of the early teachers of the college, is a Gothic structure of Indiana limestone and red brick. It was designed by Donaldson and Meier, Detroit architects, and completed in 1928. The three lower spires are 95 feet high; the tallest rises 105 feet. The campanile, which has a four-faced clock, contains 23 bells. The tower marks the site of the first college building in the country devoted to the teachings of agriculture.

25. The HOME ECONOMICS BUILDING, adjacent to the Union, completed in 1924, is of English Tudor design. Three of its four stories contain laboratories for dietetic, chemical, and textile research work. On the fourth floor are design studios and a little theater, in which students present dramatic productions.

26. The RANSOM E. OLDS HALL OF ENGINEERING, a four-story brick and stone structure W. of the Chemical Laboratory, is the main engineering building. Named in honor of the Lansing auto magnate, who contributed \$100,000 toward its construction, it houses laboratories and the offices of the civil, mechanical, and chemical engineering departments.

27. The COLLEGE LIBRARY (*open 7:30 A.M.-10 P.M. Mon.-Fri., 8-12 Sat., 2-6 Sun. during school year; 7:30-1 weekdays during summer*) stands in the center of the campus, directly across from the Hall of Engineering. The main study and reading room, accommodating 150 students, is on the second floor. The library contains many historical notes, documents, letters, and other items dealing with the inception of the college. The General Museum, occupying the third floor, has 1,200 specimens of mounted birds, 131 mounted mammals, 50 mounted fish, the noted Ward series of fossils, a collection of Indian relics, and an assortment of Michigan birds' eggs.

28. AGRICULTURE HALL, in the east-central part of the campus, is a plain but impressive four-story structure, built of limestone up to the first floor and dark red paving-brick above. White pillars rise from the ground level to the top floor. It contains classrooms and laboratories for various agricultural departments. On the third floor is a large collection of seeds and dried specimens of farm crops. Fossils, rock specimens, and several thousand topographic and physical maps, geologic folios, and physiographic diagrams are on the fourth floor.

29. The KEDZIE CHEMICAL LABORATORY, SE. of Agriculture Hall, a three-story I-shaped structure of buff limestone and red brick, was completed in 1927. The entrance court is floored with rough slate, and the walls are painted cinder black. The building accommodates special laboratories for advanced physical chemistry, including colloidal and electro-chemistry; laboratories for metallography and pyrometry; special research laboratories; offices; stockroom; and lecture rooms.

POINTS OF INTEREST IN ENVIRONS

Grand Ledge Park, 12 *m.*, Michigan State Sanatorium, 37.5 *m.* (*see Tour 4*); Tanglewood School and Home, 26.5 *m.*, VFW National Home, 35 *m.* (*see Tour 12*).

Marquette

Railroad Stations: Main St. between S Front and S. Third Sts for Duluth, South Shore & Atlantic Ry ; one block E. of intersection of Washington and Front Sts. for Lake Superior & Ishpeming R.R.

Bus Stations: Northland Hotel for Northern Line; Clifton Hotel for Greyhound Line.

Airport. Marquette County Airport on US 41-State 28, 10 miles NW. of city; no scheduled service.

Busses: Fare 5¢, half-hour service from downtown.

Taxis: Zone system, 25¢ for 1 or 2 passengers, 35¢ for 3, 50¢ for 4 within first zone.

Traffic Regulations. No one-way streets except Bloker, ½ block, no U-turns permitted on US 41-State 28; parking in business district restricted to 1 hr between 9 A.M. and 6 P.M. No turn on red light.

Accommodations: 5 hotels, City Tourist Park, 2 miles NW. on (Fourth St.) County 550 (25¢ day, \$1 weekly, all facilities); rooming houses, tourist cabins; Marquette State Park, 4 miles E. of City on (Washington St.) County 492, camping facilities, no charge.

Information Service: Marquette Chamber of Commerce, 199 S. Front St ; Upper Peninsula Development Bureau, second floor, City Hall, Washington St. between N. Third and N. Fourth Sts.

Radio Station. WBEO (1310 kc).

Theaters and Motion Picture Houses: Kaufman Auditorium, Graveraet High School, N Front and Ohio Sts., July and Aug productions by the Marquette Summer Theater, Northern State Teachers' College Auditorium, Presque Isle and Fair Ave., dramatics, lectures, and concerts, 2 motion picture houses.

Swimming: Shiras Pool at Presque Isle Park, 2 miles N. of city on Lake Shore Blvd ; Shiras Park Beach, Lake Shore Blvd.

Golf: Marquette Golf and Country Club, 1½ miles W. of business district on Grove St., 9 holes, greens fees, \$1 Mon-Fri., \$1.50 Sat-Sun.

Tennis: Presque Isle Park, 2 miles N. on Lake Shore Blvd.; Williams Park, Ohio St. between Spruce and Pine Sts.

Horseshoe Courts: Presque Isle Park; City Tourist Park; Harlow Park, Washington St. between 7th St and Park Ave.; Shiras Park, Lake Shore Blvd. near E. Crescent St.

Shuffleboard: Presque Isle Park.

Skating and Hockey. The Palestra, Fair Ave. and Third St. (winter only).

Annual Events. Speedboat Races, Independence Day, Presque Isle Park; Marquette County Fair, last week in Aug.

MARQUETTE (602 alt., 14,789 pop.), an Upper Peninsula city on the south shore of Lake Superior, occupies a series of rocky headlands that in some places rise 100 feet above the lake. The interior of the

city is ringed with tree-covered hills and granite bluffs. In the north-eastern section is a sandy area, formerly the bottom of a lake that antedated Lake Superior. Bedrock is usually found within a few inches or a few feet of the surface; outcrops that have been striated and polished by glacial action are common sights. The Dead River, dammed for water-power purposes, forms several small lakes in and near the northern section of the city. At the east, the Carp River rushes through a rocky valley into the lake.

The natural harbor fronting Marquette is edged by a series of crescent-shaped beaches. Reaching out from the sweeping shore line are the headlands, Picnic Rocks, Light House Point, and Presque Isle Point. The waterfront is lined with ore, coal, and merchandise docks, for Marquette is one of the main shipping points of the Upper Peninsula. The city resounds with the din of railroad shops, iron foundries, saw and planing mills, and the rumble of ore cars coming in from the Iron Range. From the original site of Marquette—the shelf of lowland near the waterfront on which the business district stands—residential sections have grown eastward toward the hills and northward to the Dead River, covering an upland known as the ‘Ridge’ and spreading over what was once a pine and hardwood forest.

When cold winter winds roar out of the north and west, and deep snow covers the land, Marquette hibernates. The docks are deserted, the sound of trains is muffled, and the trestles near the lake bear no burden of iron-laden cars. Spring brings welcome and familiar sounds—the thunderous cracking of ice in the lake and the crashing of ore into the hulls of waiting ships. The familiar rumble of freight cars serves further notice of the coming busy season. Now the city sheds its white mantle and reveals a metropolitan sharpness. The large summer population, attracted by the invigorating climate, begins to arrive, and later a colony of hay-fever sufferers finds relief here. Although July days send the mercury soaring in Marquette, hot nights are rare.

Many of the permanent residents are descendants of settlers from New England and the Middle Atlantic States. Others are descendants of immigrants, mainly north-country people—Finns, Swedes, Poles, Irish, Scotch, English, and French-Canadians. The Finns, most of them employed as stevedores and laborers, are slow to relinquish their native customs. They cling tenaciously to their mother tongue, especially in their churches, and still revel in their *saunas*, or steam baths. Early Indians avoided the Marquette area, for food was not easy to obtain, and the red men looked upon the ore-bearing rock as the home of lightning and thunder. The region is believed to have been visited by Father Marquette in the seventeenth century, although no evidence has been found that gives a definite date of his landing. The French were certainly the first in the territory, for the earliest maps of explorers gave the name *Rivière des Morts* to the Dead River.

Although the French had knowledge of copper deposits on the south shore of Lake Superior as early as the seventeenth century, it was not until 1830 that iron ore was discovered. In 1841, Dr. Douglass Hough-

ton, the first State geologist, verifying earlier statements, reported the existence of iron ore in the Marquette region. Three years later, an important outcrop was accidentally found by William A. Burt, a U.S. deputy surveyor, when the lodes caused considerable variation in his compass needles near the present site of Negaunee (*see Tour 19*), 14 miles inland from Marquette. In 1846, the Jackson mine was opened on the site of Burt's discovery. A shipping point was needed to transport the ore brought down the hills, and the first settlers, headed by Robert Graveraet of Mackinac Island, selected the natural harbor at the mouth of the Carp River, adjoining the present city of Marquette. Actual building began in the summer of 1849, and the place was named Worcester for the Massachusetts home of Amos R. Harlow, leader of a second group that followed Graveraet's band. Houses, stores, and a hotel were built. Sailboats brought in equipment and supplies. Forges and ore docks were constructed, and the growing village soon attracted settlers and visitors from 'down below.' Many of the Irish, Germans, and French who flocked to the mines that first season settled permanently in booming Worcester. In 1850, the town was given its present name, in tribute to the Jesuit missionary whose explorations had helped to open the Northwest Territory.

Ore transportation presented serious problems to the settlers. The material was at first carried by sleigh, one team hauling a 3,600-pound load daily. A plank road built in 1853 made it possible to transport ore in four-ton mule carts, but, even with this improvement, the task of getting ore from Marquette to industrial cities at the south was not an easy one. Until the first ship canal was opened at Sault Ste. Marie in 1855, all freight shipped by water had to be portaged around the falls. In 1857, after five years' work, the Iron Mountain Railroad was completed between Ishpeming and Marquette, a distance of about 15 miles, and locomotives began hauling ore from the Marquette Range.

Marquette was incorporated as a village in 1859. The nine years of growth that followed were disastrously interrupted in 1868, when a fire destroyed the business district and a large part of the residential section. The village was rapidly rebuilt and, in 1871, incorporated as a city. Because of her shipping advantages, Marquette prospered, as new mines were developed in the interior. The population increased slowly from 4,000 in 1870 to 4,690 in 1880. New industries were established, including a nitroglycerine plant, a leather company, a rolling mill, sawmills, a flour mill, a brickyard, and a brownstone quarry. Marquette's population jumped to 9,093 in 1890. In the following 25 years of national industrial development, millions of tons of ore were shipped. Production from the Marquette Range reached its peak in 1916 with 4,792,987 tons.

Although large-scale operations near Marquette ended in 1929, when only 16 mines were active, the city did not suffer the disastrous fate of many Michigan lumbering and mining towns. Today its income is derived from 14 industrial establishments, which employ 800 workers

and expend \$850,000 a year in wages. These industries include the manufacture of chemical by-products from wood, mining equipment, machine parts, woodenware, lumber, and water power, in addition to railroad shops, ore-loading docks, quarries, and an increasing vacation trade.

The city's cultural activities find expression in a summer theater group, which offers weekly productions, one or two in natural out-of-door settings. A municipal band gives weekly concerts. An increasing number of artists visit Marquette during the summer.

POINTS OF INTEREST

PRESQUE ISLE PARK (*one-way drive through the park*), at the northern end of Lake Shore Blvd., is a 328-acre peninsula washed by the blue waters of Lake Superior. High rocky cliffs and wooded hills impart a rugged appearance to this community playground. A small zoo, a swimming pool, shuffleboard and tennis courts, stoves, and picnic tables make Presque Isle Park the center of Marquette's recreational activities in summer. Above the cove on the north side is a historical marker on the site of a silver and lead mine, active in 1845. On the northwest corner, at Granite Point, a marker commemorates the raising of the American flag by Governor Lewis Cass in 1820. Granite Point, also known as Sunset Point, attracts many visitors on summer evenings, as the sun sinks behind the hills and the bright colors of day fade into darkness. On the east side of the park, above a red sandstone cliff, is the **CHARLES KAW-BAW-GAM MONUMENT**, marking the grave of the last chief of the Marquette Chippewa. Charles, who had lived in Marquette since the coming of the earliest settlers, died in 1902 at the age of 103. He spent his life hunting and fishing, never drank liquor, and was never arrested until the last summer of his life, when he ran afoul of the white man's law by netting suckers in a stream. The grave of his wife, Charlotte, is near by.

NORTHERN STATE TEACHERS' COLLEGE, Presque Isle and Kaye Ave., established in 1899, has an average enrollment of 900 students. The Administration Building, Peter White Science Hall, Longyear Hall, and the John D. Pierce Training School are brick structures with Tudor detail. The Administration Building contains the general offices, classrooms, and the **MAIN LIBRARY** (*open 8-5 weekdays*). In Science Hall are the departments of physical and natural science; Longyear Hall houses the education and history departments. The college has three gymnasiums and a modern auditorium, which seats 1,500.

The **CITY HALL**, Washington St. between N. Third and N. Fourth Sts., Romanesque in design, was completed in 1894. The basement and lower story are of Lake Superior sandstone, the second and third stories of pressed brick trimmed with stone. The tile hip roof is surmounted by a mansard dome.

The PETER WHITE PUBLIC LIBRARY (*open 9-9 weekdays, 9-8 June-Oct.*), Ridge and N. Front Sts., a limestone structure of Renaissance style, was built in 1904. Weathered oak is used in all interior furnishings. The public library is on the first floor, while the second floor houses the MARQUETTE COUNTY HISTORICAL SOCIETY MUSEUM AND LIBRARY (*open by arrangement with curator, 321 Cedar St.*), containing a collection of maps, books, pictures, and manuscripts that deal with the early days of the city, the county, and the Upper Peninsula; a collection of mineral specimens and relics is also shown. The main library is named for Peter White, Marquette's most noted pioneer, who as a youth joined the party headed by Robert Graveraet.

The PRESBYTERIAN CHURCH, Bluff and N. Front Sts., of English Gothic design, was completed in 1933. The exterior walls are of Lannon stone, an ivory-toned rock of varied shades and fine texture quarried in Wisconsin. The window trimmings and tracery are of Indiana limestone. The roof is supported by exposed wooden trusses, beams, and rafters.

The FIRST NATIONAL BANK, N. Front and Washington Sts., a buff limestone structure of Romanesque style, is sumptuously outfitted from walnut-paneled walls to marble counter screens and hand-chased bronze doors. The directors' room contains L. G. Kaufman's notable collection, DOLLARS OF THE WORLD (*open 9-3 Mon.-Fri., 9-12 Sat.*), comprising 1,600 coins made in 429 countries, states, provinces, principalities, and cities in the past 500 years; among the rarer items is a silver *taler*, struck for the province of Tyrol by the Archduke of Austria in 1486.

The ORE DOCKS (*open Apr.-Nov.*) are visible evidences of Marquette's primary industrial position in the Upper Peninsula. The DULUTH, SOUTH SHORE & ATLANTIC RAILWAY ORE DOCK, in the heart of the business district one block east of S. Front St., is 86 feet high and 969 feet long. The LAKE SUPERIOR & ISHPEMING RAILROAD ORE DOCK, which stretches 1,200 feet into the lake and rises 75 feet above the water, is near Presque Isle Point, three miles north of the business district. The docks, with a storage capacity of 50,000 tons each, have 150 loading pockets on their downtown sides and 200 on the uptown sides, each holding between 250 and 350 tons of ore. These compartments make it possible to pre-mix the ore at the shipping point, thus saving time at the iron works. When a large freighter is tied to the docks, chutes are opened from the pockets, and the ore drops with a deafening roar into the hold of the ship. The docks can be brilliantly illuminated for night loading. A vessel can now be loaded in a few hours, contrasting sharply with the methods of the early 1850's, when a crew of 30 men, using shovels and wheelbarrows, needed from three to six days to load a cargo of 300 tons.

ST. PETER'S CATHEDRAL (Roman Catholic), Baraga Ave. and S. Fourth St., a modified Romanesque structure designed by Edward A. Schilling, was rebuilt in 1936-7 after a disastrous fire in November 1935. The church was organized in 1857. Bishop Frederick Baraga

supervised the construction of the first building in 1864, which burned 15 years later. The present structure, larger than any of its predecessors, is of Marquette 'raindrop' sandstone. The two imposing towers at the façade terminate in pale-blue tile domes surmounted by gold crosses. Bishop Baraga, first bishop of the Catholic Diocese of Marquette and Sault Ste. Marie, is buried in a crypt within the cathedral, as are also Bishops Ignatius Mrak, John Vertin, and Frederick Eis.

THE MONUMENT TO FATHER MARQUETTE, Lakeside Park, S. Front St. near Baraga Ave., a bronze figure of the priest-explorer placed on a natural rock formation, was unveiled in 1897 in the presence of its Florentine sculptor, Gaetano Trentanove. The statue is a replica of a marble figure that stands in Washington, D. C.

MOUNT MESNARD (1,125 feet above sea level; 521 feet above Lake Superior), reached by a footpath from the Cleveland Cliffs Company's hydrostatic electric plant in the southern section of the city, offers a sweeping view of Marquette, the harbor, and Lake Superior. On the summit is a standpipe, connected with the main flume of a dam, four miles up-stream on the Carp River, which equalizes any sudden rise in water level at the dam. The aluminum-colored standpipe, 125 feet high, is lit by flood lights at night, making it visible from Presque Isle and to vessels on Lake Superior.

THE STATE HOUSE OF CORRECTION AND BRANCH PRISON (*visiting hours 8-3 Mon-Fri., 8-12 Sat., for relatives of inmates only; open to other visitors by permission*), a branch of Michigan State Prison, is near US 41-State 28 in the southern section of the city. It houses about 850 inmates, 40 per cent of whom are serving life sentences, the extreme penalty in Michigan. Established in 1885 for the Upper Peninsula convicts only, it has been made the disciplinary unit of the State prison system. It is a massive stone structure of Romanesque style, designed by John Scott.

Prior to August 1935, the inmates manufactured souvenirs and novelties in their cells, but statutes prohibiting the sale of prison-made goods in the open markets curtailed these industries, with consequent unemployment and idleness. As a partial remedy for the situation, the Arts and Crafts Department of the prison was established. Any prisoner in good standing may make suitable articles in his cell, or rent shop space at the rate of 1¢ a square foot. He buys his own raw materials and may hire his own helpers. The institution collects a tariff on the sales of his product, displayed at show counters in front of the prison and at roadside stands. The funds collected are used to supply sports equipment and entertainment, such as motion pictures.

Chests, boxes, boats, tables, stands, cabinets, lamps, and trays, many of inlay work in rare and valuable woods, are among the products. Leather work, as in the making of purses, billfolds, belts, dog harness and leashes, rugs, sweaters, and pillow covers, is also popular. Individual orders for custom work are accepted. Novelties and souvenirs are represented by tomahawks, small axes, ash trays, cigar and cigarette

holders, dolls, and humidor sets. Signet rings of bright stainless metal are hand-formed and engraved.

A branch of the Arts and Crafts Department specializes in training canaries, finches, and other pet birds. The birds, from thoroughbred stock of such lines as Daustin Red-Orange, Allison White, Allen Supreme, and Sloan-Glucke Rollers, are individually trained by prisoners.

A corollary of the Arts and Crafts Department is the monthly publication, the Marquette *Inmate*, a mimeographed magazine of excellent format and contents, which has a circulation of about 6,000. The *Inmate* began publication in 1933. All work of publishing is done by a convict staff of editors, writers, artists, mimeograph operators, and make-up men. An average issue contains short stories, sports articles, essays, articles, presenting the convict's side of some problem, news digests, selected pieces from other penitentiary papers, poetry, and messages from various officials. The *Inmate* is mimeographed in color.

POINTS OF INTEREST IN ENVIRONS

Marquette State Park, 4.2 m., Sugar Loaf Mountain, 6.5 m., Cherry Creek Fish Hatchery, 8.9 m. (see *Tour 18*).

Muskegon

Railroad Stations: Pere Marquette Depot, 586 Western Ave., for Pere Marquette R.R. ; Peck and Laketon Sts. for Grand Trunk and Pennsylvania R.R.

Bus Station: Bus Terminal, 184 Western Ave., for Greyhound, Short Way, and Central Michigan Motor Coach Lines

Airport: Muskegon Airport, 5 miles S. on US 31, ½ mile W. on Airport Road, for Pennsylvania Airlines, taxi fare, \$1 25, time 20 min.

Taxis 25¢ a mile

Urban Buses: Fare 10¢, 4 tickets for 30¢.

Piers: Grand Trunk Western Carferry Dock, foot of McCracken St., for Grand Trunk Western Carferry line, 3 boats daily to Milwaukee, passenger fare, \$3 25 one way, \$6 round trip, limit 16 passengers on each boat, no transportation of cars; The Mart, foot of Mart St., for Wisconsin and Michigan Steamship Co., one boat daily to Milwaukee, passenger fare, \$3 50 one way, \$5 50 round trip, berths, \$2.25-\$4.25 extra; \$5 one way, \$9 round trip for cars not exceeding 216 inches overall measurement, \$6 50 one way, \$11 50 round trip for cars exceeding 216 inches.

Traffic Regulations: Speed limit 15 m.p.h. in business section, 20 m.p.h. in residential section; 30 m.p.h. on US 31 except 20 m.p.h. limit on Terrace St. between Clay Ave. and Ottawa St. No turn on red light.

Accommodations: 7 hotels; boarding houses, resort inns, summer cottages.

Information Service: Greater Muskegon Chamber of Commerce, Occidental Hotel, Western Ave. and 3rd St., AAA offices, Occidental Hotel building.

Radio Station: WKBZ (1500 kc.).

Motion Picture Houses. 5.

Swimming: Municipal Beach, Bronson Park foot of Sherman Blvd; beaches at SW. end of Lake Harbor Blvd, at Pere Marquette Park, and at Muskegon County Pioneer Park, on Lake Michigan, N. of the city on Scenic Drive.

Tennis: McGraft Park, Lakeshore Drive at Addison St; Muskegon Savings Bank Courts, Smith St. and Laketon Ave; Lake Harbor Tennis Courts, Lake Harbor, 3 miles S. of city.

Golf: Golf Course, 7 miles SW of city off US 31, 18 holes, greens fee, \$1. White Lake Golf Course, on Scenic Drive on S shore of White Lake, 18 holes, greens fee, \$1. Lake Harbor Golf Course, at Lake Harbor, 3 miles S. of city, 9 holes, greens fee, 30¢ Lincoln Golf Course, on US 31, 6 miles N. of city, 18 holes, greens fee, \$1.

Boating: Pere Marquette Park, speedboat rides and races.

Annual Events: Annual convention of Polish Alliance and Polish Falcons during spring, with field meets, dancing, and calisthenics; West Shore Music Festival in May; winter carnivals at varied times; Harvest Festival, the Mart, late autumn.

MUSKEGON (625 alt., 41,390 pop.) is a modern industrial city that has risen from the sawdust of the lumbering era and still cherishes

the memory of those vigorous years. Deriving its name from the Indian term *muskego* (river-with-marshes), the city extends from the marshy banks of the Muskegon River five miles along the south shore of Muskegon Lake to Lake Michigan. A high, rolling belt of dunes protects the community from lake winds.

In contrast to the grayish-white sand dunes and the blue wind-swept waters, the smoke of many industrial plants and lake freighters hangs over the waterfront. The natural harbor, from which great fleets of sailing vessels once cleared with lumber to build the prairie towns, is protected by a \$2,500,000 breakwater.

The unsightly 'Sawdust' or 'Bottoms,' a section of weather-beaten old shacks near Pine and Clay Streets, was razed by a Federal Slum Clearance Project (1938). The passing of this section removes the last tangible evidence of the frontier. On Western Avenue, in the business district, modernistic fronts camouflage time-worn structures. East of the business district, on streets with such idyllic names as Apple, Amity, and Ambrosia, many neat white houses built by early Dutch settlers are occupied by their descendants. Two large suburbs, Muskegon Heights and North Muskegon, represent the newest and most modern additions to the city.

Muskegon's foreign and Negro groups are spread throughout the city, their sections covering almost a third of its area. Fifty-one Negro families, forced to move from the 'Sawdust' to make room for the City Market, now live on adjacent streets, particularly Ottawa Street and Muskegon Avenue, along the northwestern waterfront district. The largest Negro district is in the vicinity of Getty Street and Sherman Boulevard. The mixed Polish and Slav communities, in a southern section roughly centered by the intersection of Laketon Avenue and Park Street, constitute a large part of Muskegon's population. The Poles maintain their national traditions, observing Pilsudski Day on October 11 and Kosciuszko Day on February 22. National conventions of the Polish Alliance, with folk dancing, calisthenics, and games, are held annually.

Three small Scandinavian districts are scattered along the Muskegon Lake waterfront, two on the west side, and the third on the east side between Ryerson Creek and Four Mile Creek. Holland Dutch comprise the largest racial group. They occupy an area near the waterfront, roughly outlined by Ryerson Creek on the north, Evanston Avenue and Terrace Street on the south, Burton Road on the east, and Myrtle and Pine Streets on the west. There are three other small Dutch neighborhoods, two in the southern part of the city.

The physiographic factors that made Muskegon an important industrial city were also the basis for its early settlement. The deep Muskegon River, with the longest and narrowest valley in the State, provided transportation to the heart of the fur regions. Dense forests through which the river flowed attracted the attention of Jean Nicolet, who noted the high timber as early as 1634. Desultory fur trade was carried on in this region for a hundred years by the French, but it was

not until 1812 that a permanent trading post was established on Bear Lake by a French trader, Baptiste Recollet.

After the Ionia land office opened in 1836, the Muskegon River valley began to echo with the thud of the trail-blazer's ax. The following year a sawmill was erected. During the ensuing half-century of feverish activity, Muskegon became a lumber metropolis. In the 15 years following 1873, local mills produced an average of 800,000,000 board feet a year.

In the 'roaring eighties' Muskegon, with 47 sawmills, was a beehive of industry and trade, which bred a bizarre admixture of saintliness and sin. Churches and schools were plentiful, but the red-sashed woodsmen who lumbered the Muskegon Valley preferred to spend their time in saloons and dance halls. Muskegon was the hub of the lumberjack's universe, and here he came to spend his money, to relax, and to carouse. The Timber Beasts—river drivers and mill men—earned for Muskegon the reputation of 'Lumber Queen,' 'Red Light Queen,' 'Gambling Queen,' and 'Saloon Queen.' The Beasts were proud of their unsavory reputation and cared little for public opinion, so long as timber remained and pay day came at the end of the drive.

Even at the height of the lumber industry, Muskegon was known for its scenic and recreational attractions, and, since 1874, when Captain Fuller built the Sherman House as a summer hotel, the city has been a center of recreational activities. Dependent on a single industry, however, Muskegon was almost totally unprepared for the day when the timber was exhausted. Mills closed down or were mysteriously burned. With the beginning of the panic of 1893, the lumber industry, which during the past few years had produced 40 millionaires, began to decline steadily, and, by the close of the century, Muskegon's population had dwindled from 24,000 to 16,000.

During this crisis in municipal affairs, C. H. Hackley, Muskegon's greatest single benefactor, who had made a fortune in lumber, supported many struggling industries. A chamber of commerce was organized with Newcomb McGraft, prominent lumberman, as president. McGraft offered a tract of land as a public park, for which the city would issue bonds for \$100,000 to provide a bonus fund to bring new industries to Muskegon. Through the efforts of Hackley, McGraft, and other wealthy citizens, the industrial foundations of the present city were laid.

Railroads, pushing their way through the State, lessened the importance of the Muskegon River as an industrial asset. But the natural advantages of Lake Michigan, the sheltering dunes, and the good harbor made it possible to transform Muskegon into an industrial and shipping center. Some small efforts were made at celery cultivation, but in the main the city capitalized on its port and production facilities.

Throughout Michigan, men like Ford, Buick, and Leland were making the country motor-conscious and encouraging other young mechanics and inventors. Of the latter was Muskegon's Ross W. Judson.

who designed and perfected the Continental motor. The parent factory of the Continental Motors Corporation is here, although between 1911 and 1939 a huge plant was maintained in Detroit. The corporation manufactures principally aircraft, auto, and truck engines and parts, Alnico magnets, portable air-humidifying units, and various types of machine products. Among the many products made in Muskegon following the invention of the gasoline engine were motor castings, pistons, rings, and pumps. In 1927, the discovery of an oil pocket underlying the city attracted additional industries.

Muskegon and Muskegon Heights have 99 factories, employing more than 16,000 workers. Muskegon is a natural distributing center for the Lake Michigan coast section, one of the most productive fruit-growing areas in the United States. The Campbell, Wyant and Cannon Foundry is among the largest manufacturers of motor castings in the country. Shaw-Walker is a nationally known manufacturer of filing cabinets and other office equipment. The Amazon Knitting Company is one of the few mills in the Northwest that manufacture goods from raw cotton.

Chief exports include leather products, office furniture, paper, machine tools, wire products, piston rings, refrigerators, and foundry products.

POINTS OF INTEREST

1. The WEST MICHIGAN MART, on the waterfront at the foot of Mart St., built at a cost of more than \$1,000,000 by private capital and the Federal Government, is one of the finest port terminals on Lake Michigan. In addition to its five-story cold-storage plant, large transit warehouse, and auditorium, the Mart has a Gentry crane track for unloading vessels, an open-air market for farm produce, a first-class restaurant, and 54 acres of deck space. In the auditorium is the sports arena, which is leased for conventions, gatherings, hockey games, ice carnivals, and the annual harvest festival. The latter event attracts several hundred farmers each autumn to livestock and agricultural exhibits.

2. An INDIAN BURIAL GROUND, Morris St. between First and Second Sts., dates back to 1750 and has long been considered by Muskegon citizens as a sacred spot. According to legend, a great Indian battle was fought on the bluffs and slopes at the river's edge, when a band of wandering Algonquin, warring through the district, clashed with Potawatomi living in the vicinity. At daybreak, the Potawatomi waited on the bluffs for the Algonquin and in the conflict—'when the war clubs made a sound like thunder in the air'—thousands of warriors of both tribes were slain. Skeletons were said to have lain upon the ground for years afterward in the vicinity of the mound.

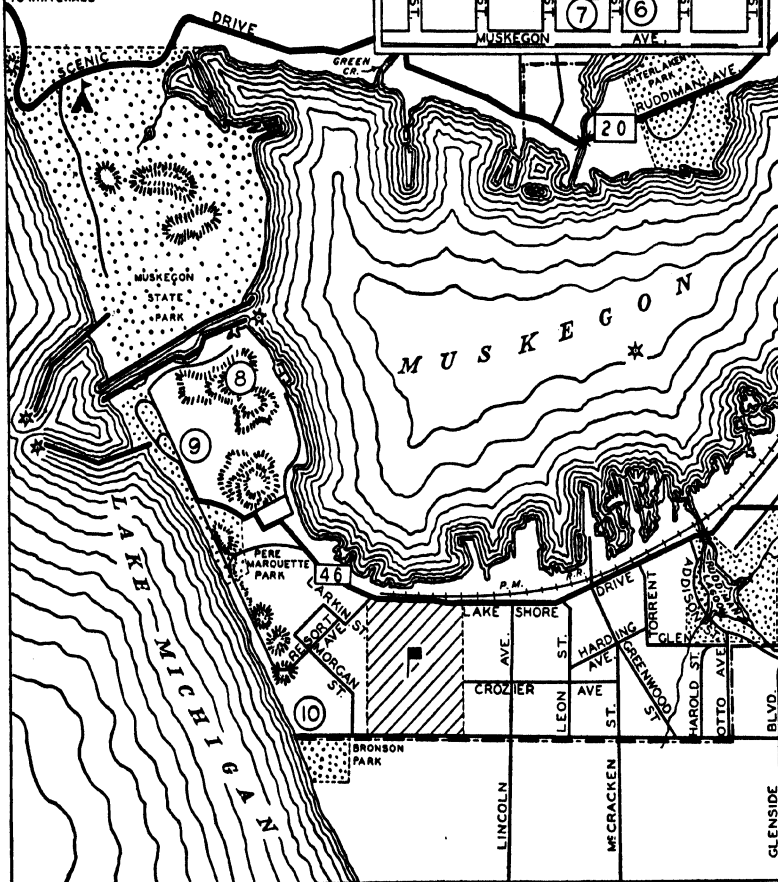
When business interests attempted to purchase the valuable lake-front property in 1920, the inviolability of the cemetery was defended by a Chicago lumberman, Martin Ryerson, whose wife was a Chipewewa. The State Supreme Court ruled that the ground must always

MUSKEGON



scale of miles

TO WHITENALL



remain a cemetery. Marked for 70 years by a large wooden cross, it has since been enclosed by a hedge. A tablet marks the grave of a chief.

3. ST. PAUL'S EPISCOPAL CHURCH Third St. and Clay Ave., is a Gothic structure of grayish greenstone built in 1892. The 12-petal design of the rose window above the entrance symbolizes the Apostles. Double rows of columns and arches in the interior support a roof of oak beams. The steps leading to the altar are of Vermont marble; the front patterns in mosaic, representing the ark of the covenant, and the altar proper are of Carrara marble. Alois Lang, noted wood-carver of the Oberammergau group, wrought the delicate figures of the lectern and the litany desk. Founded in 1886, St. Paul's is one of the city's oldest Protestant churches.

4. The HACKLEY ART GALLERY (*open 9-5 weekdays; 2-5 Sun. and holidays; 8-9 Wed. evenings Oct.-Apr.*), 296 Webster Ave., a pale-yellow brick structure trimmed with limestone, was built in 1911. Framed by pilasters at the façade are four large tablets inscribed with the names of sculptors, painters, and architects. The broad portal opens on an entry hall; two short flights of stairs at either side extend to an encircling balcony and into a large central exhibit room, with smaller rooms adjoining. The balcony and the stairways are of white Tennessee marble. Heavy beams support a wired-glass ceiling, which diffuses the sunlight.

The Hackley Gallery, one of the first municipal art galleries in the United States, was opened in 1912, following a bequest from C. H. Hackley in 1905. Its collection, valued at \$500,000, includes *Study in Rose and Brown*, by James A. McNeil Whistler; *Ann, Viscountess Irwin*, by William Hogarth; *Don Jose Juan Perez Mora*, by Goya; *The Tornado*, by John Steuart Curry; *New York Restaurant*, by Edward Hopper; and *Hampstead Heath*, by John Constable. Classes are held weekly for children 10 to 14 years of age, with an advanced class for art students; an adult class is self-supporting.

5. HACKLEY PARK, W. Clay Ave. between Third and Fourth Sts., named for its donor, C. H. Hackley, occupies a square block adjoining the business district in the center of the city. A tall granite shaft, the SOLDIERS AND SAILORS MONUMENT, by Joseph Carabelli, rises in the center. At each of the four corners of the park is the statue of a Civil War hero: Lincoln and Farragut by Charles Niehaus, and Grant and Sherman by J. Massey Rhind.

6. The HACKLEY PUBLIC LIBRARY (*open 9-9 weekdays, 2-6 Sun. and holidays*), adjoining the art gallery, Third St. and Webster Ave., was built in 1890 as a gift to the city from C. H. Hackley, who gave an additional \$25,000 for books. The library has nearly 150,000 volumes, many of which relate to Muskegon. The two-story granite building, designed by Patton and Fisher of Chicago, is Romanesque in style. The massive arched entrance is deeply recessed and generously treated with carved ornament.

7. The WILLIAM McKINLEY MONUMENT, Webster Ave. between Third and Fourth Sts., on the lawn of the Hackley School, is a raised platform with the bronze figure of McKinley supported on a cut-stone pedestal. This was designed by Charles Henry Niehaus of New York. A stone bench walls the platform on three sides. Presented by C. H. Hackley, it was the first monument dedicated to the President after his assassination in 1901.

8. PIGEON HILL, reached by a path from the W. end of Lake Shore Drive, has an elevation of 150 feet and was formerly the highest of the dunes on Michigan's western shore. It is a striking landmark when seen from the city across Muskegon Lake. Originally 217 feet high, the hill is rapidly being cut away by the Sands Products Corporation, which ships the sand for glass manufacture.

9. PERE MARQUETTE PARK, W. end of Lake Shore Drive at the harbor mouth, equipped with bathhouses, restaurants, a pavilion, and camping grounds, is noted for its SUNSET CIRCLES, vantage points for watching the gorgeous sunsets above the lake. A Coast Guard station is on the inner arm of the breakwater, and two lighthouses guard the entrance to the channel. Speedboat rides can be made through the channel and along the shore.

10. BRONSON PARK, west end of Sherman Blvd., 32 acres of wooded land fronting Lake Michigan, has picnic tables, a beach, and a public bathhouse.

11. The HACKLEY MEMORIAL, on the Central Campus at Washington Ave. and Jefferson St., was designed by Lorado Taft and dedicated by citizens of Muskegon on Hackley Day, May 25, 1929. The central figure of bronze, ten feet high, represents Pallas Athena, goddess of learning, sheltering the spark of learning with one hand and extending the torch of knowledge to rising generations with the other. The profile of Hackley is carved on the center base. On either side of the central figure are representations in bas relief of Mercury, god of commerce, and the Good Samaritan, symbolizing Hackley's business interest and his generosity to Muskegon and its people. The 19-year-old Hackley landed in Muskegon in 1856 with a capital of \$7. Three years later he and his father purchased an interest in a mill. The mill prospered, and Hackley became a millionaire.

12. The GRAVE OF JONATHAN WALKER, just inside the entrance to Evergreen Cemetery, Pine and Irwin Sts., is marked by a ten-foot monument to the man immortalized by Whittier in *The Man with the Branded Hand*:

Then lift thy manly right hand,
Bold ploughman of the wave,
Its branded palm shall prophesy
Freedom for the slave.

Arrested for transporting slaves to freedom before the Civil War, Walker was convicted by the Federal Court and the letters 'S.S.' (slave stealer) were branded on his hand. In later years, he settled

on a farm outside Muskegon. Upon his death, another abolitionist, Photius Fisk, erected the monument.

POINTS OF INTEREST IN ENVIRONS

Ashland College, 29 *m.* (*see Tour 7*); Mona Lake, 4.5 *m.*, Muskegon State Park, 9.5 *m.*, Grand Haven State Park, 13.5 *m.*, Charles Mears State Park, 45.5 *m.*, Silver Lake State Park, 46.5 *m.* (*see Tour 15*).

Port Huron

Railroad Stations: 22nd and Railroad Sts. for Grand Trunk Ry.; 2nd and Court Sts. for Pere Marquette R R.

Bus Station: 931 Military St. for Blue Goose, Bad Axe-Port Huron, Saginaw-Port Huron, and Lake Shore Lines.

Urban Busses: 5¢ zone fare, 10¢ for 2 or more zones.

Piers: Foot of Quay St. for Port Huron-Sarnia Ferry; 15 min. service; passengers 10¢, vehicles 50¢.

Bridges: Blue Water International Bridge, Elmwood St. and Pine Grove Ave. (Car and driver, 60¢; extra passengers, 10¢; pedestrians, 10¢; bicycles, 10¢). Military Street Bridge, Military St. S. and Huron Ave N.

Traffic Regulations: No U-turns except at intersections without traffic lights or directing officer. Lights required for night parking except on downtown area of Military, Huron, and Water Sts 2 large free parking lots on Quay St. between Erie Square and Huron Ave. No turn on red light.

Accommodations: 10 hotels; tourist homes; Lighthouse Tourist Park, foot of Garfield St.

Information Service: Auto Club of Michigan, 942 Military St.; Chamber of Commerce, Wall and Military Sts.

Motion Picture Houses: 7.

Swimming: Lakeside Park, 3601 Gratiot Ave.

Golf: Black River Country Club, Water St. and Strawberry Lane, 18 holes; greens fees, \$1 weekdays, \$1.50 Sat., Sun, and holidays

Tennis: Gratiot Park, Church St. and Gratiot Ave.; Pine Grove Park, Pine Grove and Lincoln Aves; White Park, 10th and White Sts.

Boating: Gage's, lower Military St.; Hall's, foot of Ravenswood Ave.; Cunningham's, 141 Gratiot Ave.

Annual Events: Blue Water Carnival, in July or Aug.; Port Huron to Mackinac Yacht Races, early in July; Police Day, July 4.

PORT HURON (599 alt., 31,361 pop.), at the source of the St. Clair River where it flows southward from Lake Huron, stretches seven and a half miles along the lake and river opposite Sarnia, a Canadian port of entry. Situated on two great waterways, Port Huron holds an important place in maritime commerce. A steady procession of oil tankers, ferry boats, pleasure craft, passenger liners, and bulk freighters files past the city. At the north are miles of white beaches and rows of summer cottages. In the more fashionable residential districts, houses built with their fronts toward the lake or river present a row of garages to the street side.

Port Huron is one of three large cities in Michigan that face sister

Canadian cities across an international river boundary. At night, the lights of Sarnia twinkle along its waterfront, topped by the vermilion tower-sign of the Imperial Oil Company, a familiar beacon for sailors and landsmen alike. Port Huron is connected with Sarnia by a fleet of ferry boats, an international bridge, and an underwater railway tunnel.

Port Huron's skyline reaches its apex in a nine-story city hospital and in the delicately wrought central span of the Blue Water International Bridge. The center of the business district, which covers 17 blocks along the St. Clair River front, is in the vicinity of the Military Street Bridge across the Black River, a turbid tributary of the St. Clair that flows through the city. In much of the area near these two rivers, buildings have been constructed to the water's edge. Many of these structures date from the late nineteenth century, but in the middle 1930's the appearance of the business section was extensively modernized. The residential sections extend fan-wise from the business section. To the west are newly built dwellings of the middle-income families; north and south, interspersed with industrial areas, are the older residential neighborhoods. Industry, not confined to any one section, is scattered mainly along or near the river front.

Somewhat separate from the main part of Port Huron is South Park, with many fine residences and commercial enterprises. The houses of Negroes who work in near-by factories are southwest of this area. The Campau section, west of the business district and bounded on the north by the Black River, is occupied by descendants of Russo-Germans. The ancestors of this group emigrated to Russia in the eighteenth century, upon Catherine the Great's promise of free land and religious tolerance. Although the Russo-Germans lived in Russia for five generations before emigrating to America, they retained their native language and customs. Church services are held in German.

Port Huron is one of the oldest Michigan settlements. Fort St. Joseph, the second fortified post established in lower Michigan, was built here in 1686 to protect the French fur trade against English aggression. Two years later, the stockade was burned, and the commander, Daniel Duluth, transferred his garrison of 50 men to Mackinac. A century elapsed before the Port Huron region again figured in the history of Michigan. Although French settlers from Detroit drifted here as early as 1782, the first permanent colony was founded in 1790, when a Frenchman, Anselm Petit, moved up from Detroit with his band of seven to settle at the mouth of the Black River. Although the records are rather obscure concerning the Petits and their progeny, it is fairly certain that they speculated in land. Petit also encouraged the growth of a French shanty colony of fishermen and beaver trappers.

Fort Gratiot was built in 1814 on the site of old Fort St. Joseph, to protect the area from British encroachment and the hostility of the Indians. At the narrows of the river, where the rapids run swiftly the year round, the fort was a strategic point for the domination of Lake Huron and the river. During the Black Hawk War (*see Tour 1*), Fort Gratiot figured prominently in the movement of Federal troops. The

fort was occupied on and off until after the Civil War, when it served as a recruiting station; it was abandoned in 1879 and dismantled in 1882.

In 1826, the Government constructed the Fort Gratiot Turnpike between Port Huron and Detroit. A land boom and a period of great development followed. The four villages at the confluence of the Black and St. Clair Rivers—Peru, Desmond, Huron, and Gratiot—united in 1837 to form the single village of Port Huron. By this time, the County of St. Clair contained 4 grist mills and 30 sawmills. The expansion of the lumber industry throughout the 'forties brought French settlers from Canada and English-speaking families from the East. Incorporated as a village in 1849 and chartered as a city in 1857, Port Huron had its importance further enhanced in 1871 by a victory, after a long-fought battle, over the city of St. Clair for designation as the county seat.

Lumbering reached its peak at Port Huron in the 1870's. Its decline did not, however, affect the city as adversely as it did many other Michigan lumbering towns. By that time a number of auxiliary industries had been established, among them shipbuilding.

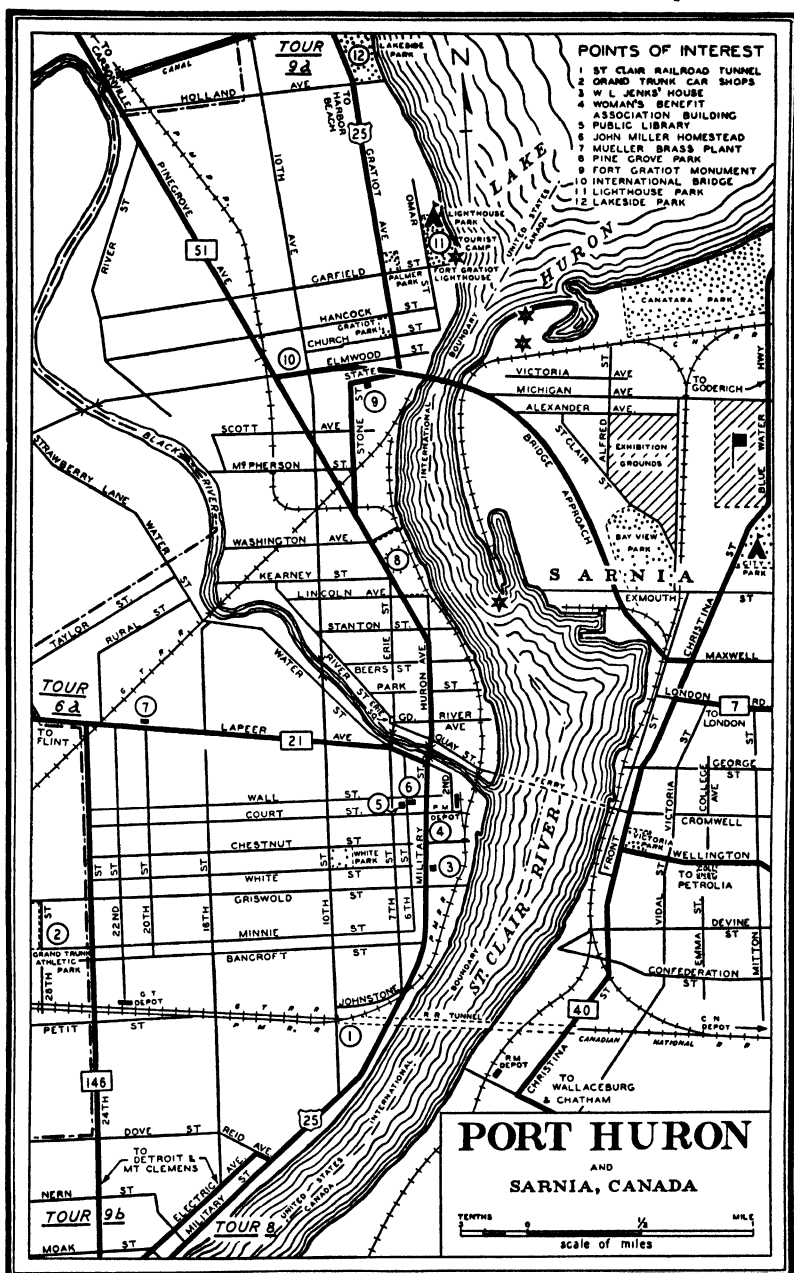
One of the earliest electric utilities in Michigan went into operation at Port Huron in 1844, and the second continuously operated electric street railway in the country was constructed here in 1886. Michigan's first commercial production of oil and natural gas was started in Port Huron in the same year, and the city's importance as a railway terminus was formally signified in 1891 by the opening of the Port Huron-Sarnia Railway Tunnel under the St. Clair River. This, the first electrified underwater tunnel ever built, was considered one of the greatest engineering achievements of its time.

Port Huron's electrical pioneering is doubly interesting, inasmuch as Thomas A. Edison (1847-1931) spent his boyhood and young manhood here. At one time he had a baggage-car laboratory on a Grand Trunk Railway train running between Port Huron and Detroit, but the railway officials hastily rescinded their permission to use it when his chemical experiments caused an explosion and fire. Edison was taught telegraphy in Port Huron by the father of a child he had rescued from the path of a moving train.

Between 1910 and 1915, the Russo-Germans settled in the city and became employed in paper mills, iron-products factories, a threshing-machine factory, feed mills, and railroad shops. The first World War created new factories, which were later converted to the manufacture of brass fittings, tools, and foundry products. In their wake came producers of auto parts, parts for refrigeration units, plumbing accessories, paper, Portland cement, textiles—in all, a total of 39 industrial establishments, employing 2,200 workers.

POINTS OF INTEREST

1. The ST. CLAIR RAILROAD TUNNEL, entrance W. side of 10th St., just S. of the junction of Johnstone and 10th Sts., is two miles long, with 6,025 feet under the St. Clair River, and connects Port Huron with Sarnia, Ont. It was completed by the Grand Trunk Railway in 1891 and electrified in 1908, becoming the first electrified underwater tunnel. The chief engineer was Joseph Hobson.
 2. The GRAND TRUNK CAR SHOPS (*open weekdays by permission*), 25th and Minnie Sts., cover 35 acres and employ 600 workers, who repair the railroad's rolling stock.
 3. The W. L. JENKS HOUSE (*private*), 1416 Military St., built in 1858, is a two-story frame house, an example of late Classic Revival architecture, with an evidently later porch of four columns and a pediment, with Renaissance details. The shafts are fluted, with 'Scamozzi' Ionic capitals, and the cornice is enriched with dentils and brackets. The early one-story columns of the rear porch are hexagonal in form.
 4. The WOMAN'S BENEFIT ASSOCIATION HEADQUARTERS (*open 8-5 Mon.-Fri.*), 1338 Military St., a dignified, two-story Italian Renaissance style building of limestone, was erected in 1917 to house the offices of the association, a sororal insurance organization established in 1892 by Bina West Miller.
 5. The PUBLIC LIBRARY (*open 9-9 weekdays, 2-5 Sun.*), Wall and 6th Sts., a gift of Andrew Carnegie, is a two-story limestone structure of Renaissance style. In 1917, it was made the first county library in Michigan. It has 58,598 volumes. The ST. CLAIR COUNTY MUSEUM (*open 1-5 Tues. and Sat.*), on the second floor, contains Indian relics, pottery, paintings, and collections of rare butterflies, moths, and flowers. The WILLIAM LEE JENKS ROOM OF MICHIGAN HISTORY (*open by permission*), also on the second floor, houses a collection of early maps, books, pictures, and manuscripts.
- A collection of pictures, portraits, statuary, and bas reliefs, representing nine nations, was presented to the library in 1911. The group includes: busts of Homer, Michelangelo, Molière, Edmund Burke, Robert Burns, Gladstone, Tennyson, and Wagner; statues of Moses and Franklin, and a twin statuette of Goethe and Schiller; portraits of Sir Thomas More and Sir Walter Scott; and a bas relief of the Landing of the Pilgrims.
6. The JOHN MILLER HOMESTEAD, 518 Wall St., one of the oldest houses in the region, was built in 1836 and presented to the city by Miller's descendants in 1921. It is a two-story, timber-framed structure on a limestone foundation, with a delicate Colonial cornice. On the northeast corner is a rectangular brass plate inscribed to John Miller, pioneer lumberman and banker of St. Clair County, placed there by his son and grandson during the presentation ceremonies.
 7. The MUELLER BRASS PLANT (*open 2 P.M. Mon., Wed., and Fri.; tours*), 20th St. and Lapeer Ave., one of the largest enterprises



in Port Huron, manufactures a wide variety of brass products, including brass rods, pipes, bolts, and parts for virtually every machine or instrument from microscope to battleship. It began as a war industry in 1917; in 1937 its annual pay roll amounted to \$2,500,000.

8. PINE GROVE PARK, 1104 Grove Ave., is a 30-acre wooded tract fronting the St. Clair River. A little mail boat puts out from the marine post office in the park to deliver mail to passing ships. Sailors lower ropes from the larger craft to haul up their mail. In the southeast corner of the park is a SOLDIERS MONUMENT, erected in 1893 to commemorate those who died in the Civil War. At the base of the central granite shaft are two large cannon that were used in the siege of Vicksburg. In the northeast corner of the park is the EDISON MEMORIAL BOULDER, 12 feet high and weighing 38 tons, placed here in 1929 in honor of the inventor, whose Port Huron home was about 800 feet from the spot.

9. The FORT GRATIOT MONUMENT, S. side of State St. E. of its junction with Stone St., is a one-and-a-half-ton granite slab, erected in 1881 to honor General Charles Gratiot, engineer-officer for whom the fort was named. The monument marks the site of the original fort.

10. BLUE WATER INTERNATIONAL BRIDGE (*car and driver, 60¢; extra passengers, 10¢; pedestrians, 10¢; bicycles, 10¢*), approach at Pine Grove Ave. S. of Elmwood St., is an 871-foot cantilever span, completed in 1938 at a cost of \$3,000,000. The bridge forms an important link in the shortest route from Michigan to the East. Ralph Modjeska and Frank H. Masters were the engineers.

11. LIGHTHOUSE PARK, bounded N. by Robinson St., E. by Lake Huron, S. by Riverview St. and W. by Omar St., two-and-a-half blocks long and one-and-a-half blocks wide, is the only tourist camp inside the corporate limits of Port Huron.

On the east side, fenced off from the rest of the park, is FORT GRATIOT LIGHTHOUSE (*open weekdays by arrangement with the keeper*), Garfield and Omar Sts., an 80-foot cylindrical tower of white-washed brick, surrounded by a 10-foot sea wall. Its blue light is visible for 16 miles. The lighthouse was constructed in 1829 to replace an earlier light south of this point, which was destroyed in 1828 by a storm. Considerable alterations were made in the new structure in 1861.

12. LAKESIDE PARK, 3601 Gratiot Ave., a municipally owned bathing beach, has a large bathhouse, dance hall, and picnic and playground equipment.

POINTS OF INTEREST IN ENVIRONS

Morton Salt Co., 4.3 m., Chrysler Parts Plant, 5.5 m., Gar Wood Boat Works, 6 m. (all in Marysville), Tashmoo Park, Walpole Island Indian Reservation (Algonac), 27 m. (*see Tour 8*); Woman's Benefit Association Camp, 10.5 m., St. Clair State Park, 13 m. (*see Tour 9*).

Saginaw

Railroad Stations: New York Central Station, W. Genesee Ave., one block E. of Michigan Ave., for Michigan Central R.R., New York Central System, and Grand Trunk Ry.; Potter St., three blocks E. of Washington Ave., for Pere Marquette Ry.

Bus Stations: Eastern Michigan Bus Station, 217 Federal Ave., for Blue Goose, Short Way, Yellow Bus, Saginaw-Port Huron Bus, Stafford Motor, Great Lakes Motor Bus, Hiawatha Trails, Central Coach, Thumb Bus, Peoples Rapid Transit, and Hansen Motor Transit Lines.

Busses: Fare 5¢.

Taxis: 25¢ for first 2 miles, 10¢ for each additional ½ mile; no charge for extra passengers

Traffic Regulations: No turns on red light. Parking limited to 45 min. on all streets in business section between 8 A.M. and 6 P.M.

Accommodations: 15 hotels. Municipal tourist camp at Ezra Rust Park, 203 Rust Ave. (\$4 a week).

Information Service: Board of Commerce, N. Washington and Johnson Sts.; AAA, 106 E. Genesee Ave.

Theaters and Motion Picture Houses: City Auditorium, Washington and Janes Ave.; 14 motion picture houses.

Swimming: Merzhon Whittiers Natatorium, S. of Johnson St. Bridge on W. side of Saginaw River

Golf: Westdale Golf Course, 1 mile W. of city limits on State 47 and 46, greens fee, 50¢; Golfmore, 1½ miles W. of city limits on US 10, greens fee, 35¢; Rolling Green, ½ mile N. of city limits on US 10, greens fees, 50¢ weekdays, 75¢ Sat., Sun., and holidays; Wolverine Golf Course, NW. of city limits, greens fee, 25¢. All courses are 9 holes

Tennis: School Courts, one block N. of Gratiot on Elm St., fee 10¢.

Athletics: Hoyt Park, S. Washington Ave.

Annual Events: Saginaw County Fair, held in mid-Sept.

SAGINAW (593 alt., 80,715 pop.), seat of Saginaw County and chief industrial city of east-central Michigan, stretches four miles along both banks of the Saginaw River. The water-cleft halves of the community are interlaced by a network of bridges; the gentle bends of the river are reflected in obtuse- and acute-angled street intersections. Modern in most respects, Saginaw has an uncommon anachronism in its 200 'town pumps,' which supply water to those who dislike the taste of the chemically treated water of the municipal filtration plant.

Formerly a lumbering and agricultural center, Saginaw retains withered vestiges of the one and the mature bloom of the other. All that remains of the lumbering era are scores of old houses built with money

gained from cutting down Saginaw forests. Agriculture, however, continues to increase the community's wealth. On Saturday afternoons, long lines of automobiles file into Saginaw from outlying farming districts, and ruddy-cheeked farmers become almost as numerous as urbanites in the soda fountains, 'five-and-tens,' and motion-picture houses.

The population is relatively stable and homogeneous. A Negro-Mexican neighborhood, whose residents are mainly foundry workers, occupies the northeastern section of the city. Brought to the Saginaw Valley to work in the beet fields, the Mexican group has been greatly depleted by recent deportations. Negro, Mexican, and a sprinkling of white children attend the Potter School, 1210 N. 10th St., which is at the center of the Negro-Mexican district.

Saginaw Bay, a giant thumb of Lake Huron lying about 20 miles to the north, is the funnel into the Saginaw River through which lake shipping passes on its journey up to the city. Saginaw Bay appears variously on French maps of the seventeenth and eighteenth centuries as 'Sikonam,' 'Sakonam,' 'Saguinam,' and 'Saguinam.' Southeastern Michigan was generally described as the Saguinam Country, as early as 1688; later, when lumber-camp raconteurs told of Paul Bunyan's legendary feat of 'logging off the Saginaw Country,' the reference was to the entire Lower Peninsula.

The earliest white men to penetrate the Saginaw Valley were from Canada. In 1816, Louis Campau built a fur-trading post near what is now the foot of Throop Street. Two years later, at the request of Governor Lewis Cass, he built a council house and, in the following year, helped Cass negotiate the Treaty of 1819 with the Chippewa. At that time Fort Saginaw was constructed on the west side of the river, where the Hotel Fordney stands today. Unrest among the Indians made it necessary to station troops at the settlement in 1822. The severity of the following winter, disastrous spring floods, and a summer epidemic of 'intermittent fever' prompted the garrison's commander to write the War Department that 'nothing but Indians, muskrats, and bullfrogs could possibly exist here.' The post was abandoned in the autumn of 1823.

The pessimistic tone of the commander's report and the withdrawal of the garrison temporarily blighted the development of Saginaw. The presence of hostile Indians further deterred Easterners from entering the area, a circumstance welcomed by fur traders, who knew that settlers would deplete the region's wild life. Thus, in 1824, Saginaw consisted merely of several huts clustered around the post of the American Fur Company. The settlement enlarged slowly throughout the early 1830's, but even at that time a night guard was stationed at the door of each house, while the rest of the family slept. Saginaw was incorporated as a village in 1837.

In the 'thirties and 'forties, timber 'lookers' penetrated the Saginaw Valley, selected tracts that would produce the heaviest yield, and bought them at the land office in Detroit for approximately \$1.50 an

acre. Fourteen steam sawmills were in operation on the Saginaw River and its tributaries by 1857. Lumberjacks, working the heavily forested interior, banked the cut timber on rollways to await the spring drives. Both ends of each log were stamped with a branding hammer, so that it could be identified later. After being floated to the 'boom works,' the logs were maneuvered into a large enclosure formed by boom logs coupled end to end. At the downstream part of the enclosure was a narrow gap; as the logs passed through this aperture, they were claimed by their owners. A slotted pin was driven into each log, a rope was drawn through the pins, and the logs were bound together in a raft, which was then towed to the mill.

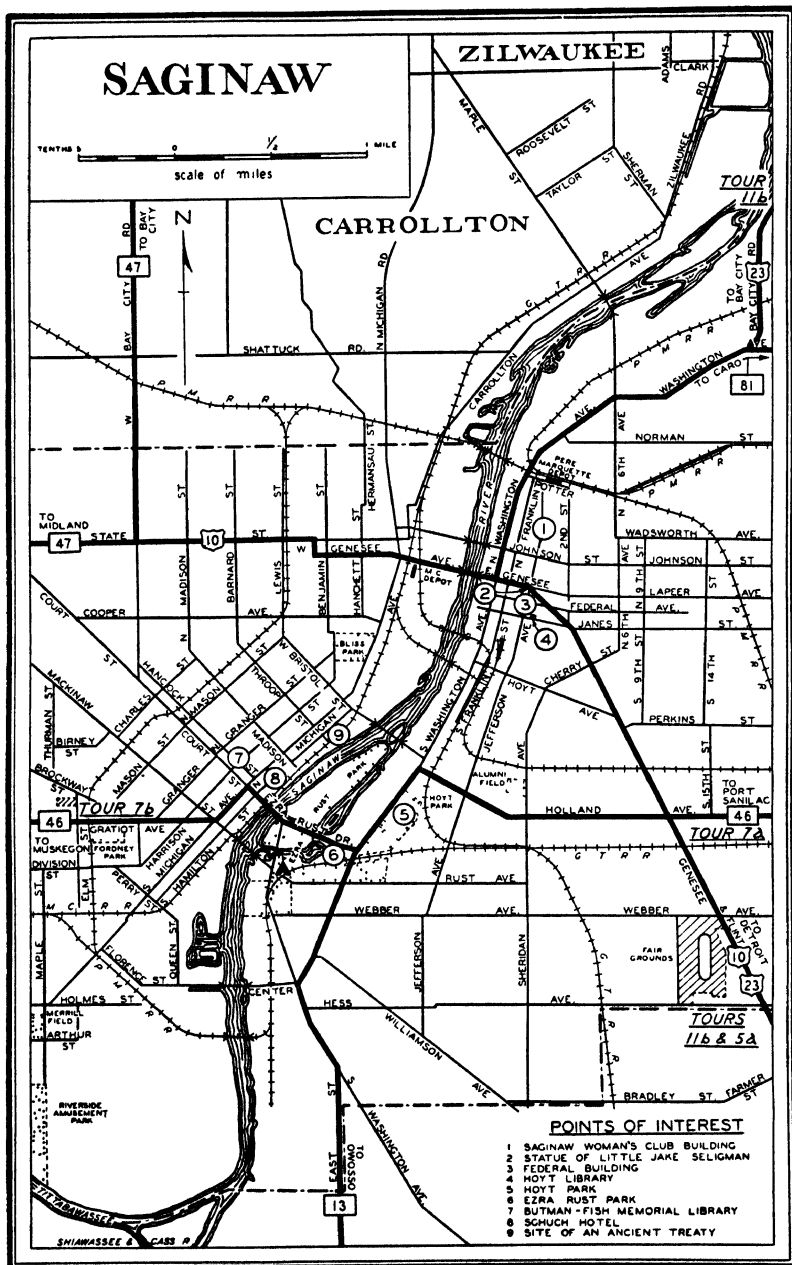
When the Saginaw lumbering industry began to decline, the consequent loss was offset by the development of coal deposits that had been discovered by prospectors drilling for salt. By 1890, Saginaw County had become the principal coal field in Michigan.

The traditional rivalry between East and West Saginaw, characteristic of cities similarly divided by a river, was ended in 1889, when the two communities were united as the City of Saginaw. A new charter was adopted in 1936. Saginaw's present city-manager-council form of government has been studied and praised by schools and municipalities throughout the country.

Saginaw's 121 industries employ 15,500 workers and manufacture a variety of products, including tapes, rulers, boilers, graphite, washboards, kneading machines, and automotive parts. Here is the largest gray-iron foundry in the world, established in 1907 as the Grey Iron Foundry Company and later absorbed by the Chevrolet Motor Company. The Baker-Perkins Company, a leading producer of cooking machinery, founded in 1893 and enlarged in 1920, consists of six buildings on a 17-acre tract. Saginaw is also the center of a large agricultural region. A local bean and grain elevator has a capacity of 18,000,000 pounds a year, and extensive sugar-beet crops find an outlet in the refineries of Saginaw and surrounding towns. Two hundred oil wells and numerous brine deposits are in the immediate vicinity.

POINTS OF INTEREST

1. The SAGINAW WOMAN'S CLUB BUILDING (*open only to guests of members, except during flower shows in early June and September*), 311 N. Jefferson Ave., a large two-story house of Michigan white pine, shows late Greek Revival influence in its low-pitched gable and porches. Completed and occupied in 1862 by Thomas Doughty, a Saginaw businessman, the house originally had seven rooms on the ground floor and five on the second. The building was purchased by the club in 1932; subsequent alterations left only the kitchen and a study or music room unchanged. The latter, with original door locks, fireplace, chandelier, and furnishings, is now a lounge. Organized in 1893, the club is the second oldest in the city.



2. The STATUE OF 'LITTLE JAKE' SELIGMAN, surmounting a four-faced clock atop the Tower Building in a triangle formed by Genesee, Lapeer, and Jefferson Aves., is a self-erected memorial to Saginaw's best-known clothing merchant. Little Jake's incredible merchandising exploits made him a legendary figure of the lumber era, and his activities as a banker, real-estate dealer, and operator of a horse-drawn street railway added much to the luster of his name. Seligman purchased the Tower Building in 1890, apparently for the sole purpose of erecting the clock and statue, administrative rights to which he retained, when he sold the building a short time later. The life-sized copper figure of Little Jake, who was only four feet, four inches tall, is attired in a long coat and high hat. When the figure was unveiled, many residents assumed that it was a likeness of some Civil War general, a misidentification that infuriated Little Jake and led him to affect garments and attitudes increasing the similarity between the statue and himself.

Although it is the most enduring of his advertising stunts, the clock-statue inspiration was no more spectacular than others employed by this Barnum of merchants. To attract crowds, Seligman often scattered coins into the streets from an upper story of his store, and hired bands to march through the city. When lumberjacks surged into Saginaw at the end of the spring drive, Little Jake threw vests to the throng, promising free coats and trousers to the men who captured them in the ensuing free-for-all. Jake kept his word by presenting the victors with coats and pants, but the vests were usually torn to shreds in the battle, and Seligman was happy to replace them—for \$10 or \$12 apiece.

Little Jake moved to Detroit in 1892, but before leaving he offered to sell the clock and statue to the city for \$1,200. The council demurred, replying it felt sure that such a 'public spirited' citizen would donate the memorial to Saginaw. In this, the city fathers underestimated Little Jake's genius for salesmanship. After prolonged dickering, the city paid Little Jake's sister-in-law \$600 for the statue and clock and appropriated \$150 a year to keep the latter in running order.

3. The FEDERAL BUILDING, Federal and Jefferson Aves., is a picturesque stone structure of French Gothic style, its façade and side walls broken by buttresses that frame rounded windows. The original building, dedicated in 1898, was designed by William Martin Aiken in the general style of the Tocqueville Chateau in France. This was a gesture in honor of Alexis de Tocqueville (1805-59), French statesman, who visited America and made a pleasing reference to the Saginaw country in his *Book of Travels* (1835). In 1937, the Federal Building was enlarged, in keeping with the design of the original structure.

4. The HOYT LIBRARY (*open 9-9 weekdays*), Janes St. and Jefferson Ave., a rough-cut Bay Port stone structure, trimmed in Lake Superior red sandstone, was designed by Van Brunt and Howe in the Richardsonian Romanesque style. Its construction in 1890 was made possible through a bequest of \$100,000 from Jesse Hoyt, a New York

financier who invested in Michigan lumber. The building was enlarged in 1920-22. The Janes Street entrance is a reproduction of the Norman porch and stairway in the close of Canterbury Cathedral in England. A Schwedler's maple and several beech and hawthorn trees brought from England in the 1890's by Harriet Howe Ames, the first librarian, shade the landscaped grounds. Hoyt Library is a depository for Government documents; among its 48,000 books are a notable genealogical collection and more than 600 volumes of Michigan and Saginaw Valley history.

5. HOYT PARK, S. Washington Ave., a 27-acre playground, is used extensively in summer as a baseball, drill, and pageant center. During the winter, the snow-covered slopes serve as runways for tobogganing. Dense groves cover the uplands.

6. EZRA RUST PARK, S. Washington Ave. and Ezra Rust Drive, is named for its donor, a wealthy lumberman. Stretching for more than a mile along the Saginaw River, the 136-acre landscaped tract has picnicking facilities, baseball diamonds, a football field, and tennis courts. Included in the park property are three bridge-joined islands, named for the tribes—Ojibway, Ottawa, and Osakina—that participated in the Cass Treaty of 1819.

The CITY WATERWORKS (*open 8-5 daily*), consisting of three Gothic style buildings, lies in the center of the park, near a small lake. Covering an area of 183,493 square feet, the \$2,500,000 plant is dominated by a tower containing a 125,000-gallon water tank. At first glance the interior of the main plant resembles a cathedral, with its lofty ceiling and paneled walls. A boulder inset with a bronze tablet, on the lawn west of the main entrance, marks the SITE OF AN ANCIENT INDIAN VILLAGE occupied by the Sac in the first part of the seventeenth century and, later, by the Ojibway. The village was known as *Sa-gin-a-we* or *Sagu-e-nah*, from which the name Saginaw was derived.

7. The BUTMAN-FISH MEMORIAL LIBRARY (*open 9-9 weekdays*), N. Harrison and Hancock Sts., a two-story brick structure trimmed in concrete and Bedford stone, was built in 1915 with funds donated by Mrs. Myron Butman and Mrs. Mary P. Fish. The library contains 32,000 volumes.

8. The three-story brick SCHUCH HOTEL (*always open*), 301 N. Hamilton St., built in 1868, is said to be the oldest continuously operated hotel in Michigan. In the hotel is a collection of 50,000 articles, ranging from Chinese wishing bowls to American spinning wheels, which was begun by John P. Schuch at the age of 14, when he gathered Indian arrowheads in the Saginaw Valley. Displayed in the bar, lobby, and dining room, the exhibit contains 600 German beer steins and mugs; 7,000 rare books, including early German Bibles, one dated 1521; 10,000 theater programs dated since 1753; pipes; medals, knives; firearms; snuff boxes; glassware; Chinese gongs, and Flemish tapestry. Three hundred elephants of varied composition, ranging in height from one-quarter inch to three feet, are scattered throughout the dining room.

9. The SITE OF AN INDIAN TREATY, Hamilton and Throop Sts., the spot where Governor Lewis Cass signed the treaty (1819) by which the Indians relinquished all claims to northeastern Michigan, is marked by a plaque on a boulder.

POINTS OF INTEREST IN ENVIRONS

Veterans' Memorial Parkway, 3 *m.* (see *Tour 11*).

Sault Ste. Marie

Railroad Station: Terminal, Portage Ave and Magazine St., for Minneapolis, St Paul & Sault Ste. Marie R.R., Duluth, South Shore & Atlantic R R , and Canadian Pacific R R.

Bus Stations: 128 W. Spruce St. for Booth Transportation Line, 917 Ashmun St. and Ojibway Hotel, Portage Ave , for Great Lakes Motor Bus Co.; W. Spruce St. and Osborn Blvd for Mackinac Motor Bus Corp.

Airport: Municipal Airport, Ashmun Hill, 2 blocks W. of Ashmun St.; planes for charter only, taxi fare 25¢, time 5 min.

Taxis: 25¢ upward.

City Busses: Fare 10¢.

Piers: End of US 2, off Water St , for Canadian Ferry; end of E Portage Ave. for Sugar Island Ferry; Brady Pier, off Water St. for Cleveland and Buffalo Transportation Co , corner Water and Johnstone Sts for Great Lakes Transit Co.

Traffic Regulations: No parking downtown, except on side streets; one hour parking on Ashmun St., 8 A.M. to 6 P.M. No turn on red light.

Accommodations: 5 hotels; Municipal Tourist Camp, E. Portage Ave., 1 mile from downtown.

Information Service: Chamber of Commerce, Ojibway Hotel, W. Portage Ave.; Chippewa County Auto Club, 413½ Ashmun St.

Theaters and Motion Picture Houses: Ritchie Auditorium, Senior High School, E. Spruce St , concerts; 2 motion picture houses.

Swimming: Sherman Park, 4th Ave., the Shallows, 2 miles W. of Sherman Park.

Golf: Country Club, 2 miles E of city on E. Portage Ave at Riverside Drive, 9 holes, greens fee, \$1 a day.

Tennis. Public Courts, E Portage Ave. and Bingham St , fee 20¢ an hour. Horse-shoe and shuffleboard courts, fee 20¢ an hour.

Tobogganing: Toboggan slide, Brady Park.

Annual Events: City-sponsored Winter Sports Carnival in Jan or Feb ; Herring-Choker Jamboree late in Jan. or early in Feb , Smelt Jamboree in May, Crow Hunt in April.

SAULT STE. MARIE (607 alt., 13,755 pop.), or the 'Soo,' as the city is familiarly known, stands at the northeastern tip of the Upper Peninsula, on the south shore of the St. Mary's River, and is connected by a bascule railroad bridge and a ferry with its Canadian twin, Sault Ste. Marie, Ontario. It is the site of one of the finest examples of modern engineering—the St. Mary's Locks, four giant reservoirs that raise the upbound boats approximately 19 feet to the level of Lake Superior.

St. Mary's Rapids, the original flume through which the higher waters of Lake Superior cascaded to the lower levels of the other lakes,

are adjacent to the Locks. The volume of these falls—part of the river of the same name, which forms an international boundary between the United States and Canada—has greatly diminished in the three centuries following their discovery, because of the increasing amount of water needed to lock ships through the canals. Their wild and rugged beauty can be seen from almost any point along the canal walls. When the Jesuit priests first gazed upon this spot, they are said to have exclaimed 'Sault!' (falls), and later '*Sainte Marie*,' feeling that only the name of the Blessed Virgin could grace anything so beautiful. Beyond the rapids in Canada are the rocky hills. Adjoining the locks is a calcium-carbide plant, and somewhat removed from the waterfront is Fort Brady, built on the site chosen by General Philip Sheridan (1831-88).

The first—and in many ways the best—view of Sault Ste. Marie is from Ashmun Street, on which all roads from the south, east, and west converge. From the top of the hill, reached after entering the body of the city, the main pattern of the business and residential areas becomes evident. The northern section of Sault Ste. Marie, a cigar-shaped strip of land divided from the rest of the city by the Michigan Northern Power Company canal, is the center of the Soo's business and industrial activities. Parks and ferry docks face the river, flanked by a compact group of business structures and municipal buildings. Although the east and west ends of the artificial island contain some of the better homes, the major residential district is in the southern section, connected to the business district by numerous bridges spanning the canal.

Ashmun Street, bisecting the city from north to south, and Portage Avenue, paralleling the waterfront, are the main business arteries. Small shops line these thoroughfares. The manufacturing plants are scattered along the waterfront, smudging skies that once knew only the smoke of the Chippewa campfires. Near the factories live Canadian, Italian, and German workers.

The Soo is a colorful city the year around. Summer brings brightly garbed resorters, among them many persons seeking escape from hay fever. Deer hunters, in protective red, tramp the streets in autumn, pausing here en route to Canada or the Whitefish Bay country. Snow heralds the winter-sports season and brings the Herring-Choker Jamboree, named for the method of spearing herring through the ice—a carefully placed thrust through the back of the neck that shuts off the fish's air supply. Spring brings a smelt festival and the annual Crow Hunt sponsored by the Sportsmen's Club. The club chooses sides during the hunt, and the losing group stages a banquet for their sharper-shooting opponents.

Sault Ste. Marie, described by Henry Clay as the 'remotest settlement in the United States, if not in the moon,' was the first permanent settlement in Michigan and is the third-oldest surviving community in the United States. Etienne Brulé, sent by Champlain to find a Northwest Passage, landed on its present site in 1618, naming it Sault de

Gaston, in honor of the King of France, Louis XIII. Following Brulé came Jean Nicolet in 1634, also seeking a Northwest Passage—indeed even carrying a brocaded silk robe to wear before the Great Khan, if he reached China. Pierre-Esprit Radisson and Medart de Groseilliers voyaged past the St. Mary's Rapids in 1658, opening French trade and dominion in the new territory. Later, when their furs were confiscated by French authorities, these two turned their commercial allegiance to the English crown, and their efforts for the latter hastened French proclamation of possession in the new territory. In 1668, the Jesuits built a mission at the Soo, and the site became a center for missionary work under Father Jacques Marquette. Two French priests passing through the settlement in 1670 found 'a square of cedar posts twelve feet high, with chapel and house inside the fort,' and more than a score of French traders attending services regularly. Daumont de St. Lussion and other Frenchmen landed at the Soo in 1671, when western America was claimed for his Majesty, Louis XIV.

The beginning of the eighteenth century found a diminished population at the Soo. Warring Iroquois drove the Saulteur Chippewa to the protection of the Michilimackinac and Detroit forts, and these posts, with Green Bay and Hudson's Bay, attracted the fur trade because of their security. In 1731, only a few Chippewa lived at the rapids on the St. Mary's. France, however, hard-pressed by the British, determined to retain her fading fur trade and, in 1751, authorized the construction of a fort at the Soo by Louis de Gardeur, Sieur de Repentigny. The Soo continued under French domination until 1762, when the English took possession; that same year Fort Repentigny was destroyed by fire. After the Revolutionary War, the Treaty of Paris in 1783 ceded all lands south of the Great Lakes to the United States, but the British continued trading with the Upper Peninsula Indians and refused to surrender the region.

Military and political intrigue did not dim the Soo's commercial importance. In 1797, a bateau canal and lock was built on the Canadian side, forerunner of today's modern battery of locks. The lock, with a nine-foot lift, was used by French and British fur traders, until it was destroyed by American troops in 1814.

Even after the War of 1812, the British clung tenaciously to their holdings in the upper Great Lakes region, and in 1815 still occupied a fort at Drummond Island, about 50 miles southeast of the Soo (*see Drummond Island, Tour 17*). Five years later, Lewis Cass, territorial governor of Michigan, carried the American flag into this remote region and, with reckless courage that almost precipitated a massacre by pro-British Indians, claimed the territory for the United States. The American Army built Fort Brady in 1823, thus ending French and English reign in the Soo.

By 1850, Sault Ste. Marie was a village, with one wide roadway extending west from the Fort Brady grounds and a few narrow streets winding aimlessly southward. The population was about 500, mostly French, with some half-breeds and a few Indians. At that time no

signs of agriculture or manufacture had appeared. The wide platforms in front of the taverns on Water Street were always occupied by leisurely tradesmen. Tokens or printed cardboard checks issued by various merchants were used as money. A token reading, 'Good for 25 cents, M. W. Scranton,' or bearing some other responsible storekeeper's name, might change hands all winter long. The spring thaw was the signal for clearing debts and liquidating tokens.

In 1855, the State of Michigan, financed by a land grant from Congress, built a canal and lock at the Soo. This act was resented by the many residents who earned their livelihood portaging freight around the rapids. When a breach in the embankment occurred a few years later, the townspeople refused to give aid, and only the efforts of sailor volunteers prevented serious damage. During favorable weather, the canal connected the area with the world 'down below,' but in snow-bound months the village was as isolated from the rest of Michigan as it previously had been. Mail came overland from Saginaw about five or six times during the winter, and stores stocked up with provisions before the end of the navigation season. It was not until 1874 that Sault Ste. Marie was incorporated as a village; its city charter was granted in 1887.

The Weitzel Lock, an improvement in the original canal, was finished in 1881, the same year the Federal Government took over control of the locks. Fifteen years later the Government added Poe Lock to meet the demands of increased navigation. The double battery of locks aided migration and helped develop the territory, following the discovery of mineral deposits in the Lake Superior region.

By the end of the nineteenth century, Sault Ste. Marie was a city of 10,000. Its location drew many new industries to the waterfront, providing work that restrained local young people from migrating to the large industrial cities. The steady flow of traffic between the two Soos is characteristic of one of the most amicable borders in the world. A monument erected in 1936 on the Canadian Soo ferry dock points to the more than a century-old friendship between these two countries as 'a lesson in peace to all nations.' Many other memorials to the past, recalling tales of calumny and betrayal, courage and faith, are scattered about the town. Tablets and markers are dedicated to the French, British, and American armies, fur traders, trappers, priests, adventurers—all part of the cavalcade that penetrated and colonized the Northwest Territory.

Set against high hills that afford panoramic views of the river and its tree-covered islands, the Canadian Soo draws many vacationists. Paper mills, nickel steel works, machine shops, and foundries are its main industries. Between the twin American and Canadian cities is Sugar Island, on which a few hundred Chippewa still reside.

During the 1930's, Sault Ste. Marie experienced a rapid expansion in industry and the tourist trade. Fifteen industries employ 1,600 men, manufacturing leather, carbide, woolen clothing, lumber, electric power, butter, beer, and foundry products.

POINTS OF INTEREST

1. The **CARNEGIE LIBRARY** (*open 9-5:30 and 7-9 weekdays*), Armory Place between Bingham and Kimball Sts., is a one-story limestone structure, in Italian Renaissance style. At the entrance are two stone lions presented by former Governor Chase S. Osborn. The library houses a museum of local history, which contains a collection of American Fur Company letters, the correspondence and papers of John Johnstone, first white settler in the Soo, and other Northwest Americans.
2. The **SITE OF FATHER MARQUETTE'S MISSION**, foot of Bingham Ave., is marked by a bronze tablet on a granite boulder. Built in 1668, the church, first permanent Christian place of worship in the State, consisted of a rude log chapel and dwelling house.
3. **BRADY PARK**, Brady Park Drive and Water St., 12 acres of land facing the waterfront, gives a clear view of the St. Mary's River, Sault Ste. Marie, Ontario, and the Canadian Soo Locks. Brulé, Nicolet, Joliet, and other *voyageurs*, fur traders, and missionaries landed on this spot. The **SITE OF REPENTIGNY'S FORT**, later the site of Fort Brady, which was moved to its present location in 1893, is marked by a bronze tablet on a granite boulder in the southeast corner of the park. A 44-foot **SEMI-CENTENNIAL OBELISK**, made of Connecticut granite, was placed here in 1905 to commemorate the fiftieth anniversary of the opening of the St. Mary's Falls Canal. Three of the four bronze tablets affixed to the sides of the obelisk are inscribed with a brief history of the locks. The fourth, or north, tablet commemorates the landing of St. Lussou in 1671, the building of a bateau canal and lock on the Canadian side in 1797, and the arrival of Governor Lewis Cass in 1820. A toboggan slide in the park is used in the annual Winter Sports Carnival.
4. The **AMERICAN FUR COMPANY BUILDING** (*private*), 126 Park Place, now much altered and used as a private residence, is a two-and-one-half-story structure, the first story of stone and the remainder of frame. It was formerly the headquarters of the American Fur Company founded by John Jacob Astor, who bought the Soo interests in 1816 from the Northwest Fur Company. Governor Lewis Cass signed the Fort Brady treaty with the Indians here.
5. **GOVERNMENT PARK**, Ashmun and Water Sts., nine acres in area, is adjacent to Brady Park, with its waterfront side facing the locks. It is part of the old Indian reservation. An electrically lighted rainbow fountain plays onto a 30-foot pond that is stocked with fish and turtles. At the W. Portage Ave. entrance is a Japanese torii, or sacred arch, with Japanese lanterns behind it, the gift of Chase Osborn. Past the **KIOSK**, in which are housed pictures of the locks during their various stages of construction, is a full view of the St. Mary's Ship Canal with its four locks. The Federal Weather Bureau maintains a station in the park.

6. The ADMINISTRATION BUILDING (*open 8:30-4:30 Mon.-Fri.; 8:30-12 Sat.*), between Poe and Weitzel Locks, is a three-story gray stone building. A MINIATURE MODEL OF THE LOCKS is displayed on the first floor, and here also is a MARINE LIBRARY that provides seamen with reading material. The second floor houses the U. S. Engineering Department, and the third floor is used as a storehouse.

7. The MARINE POST OFFICE (*open always*), between Poe and Davis Locks, a two-story stone building, also houses the Government telephone office and reporting rooms. All boats passing the locks must report full details of their voyage. Charts for any locality on the Great Lakes can be bought in the chart room.

8. ST. MARY'S LOCKS (*open during navigation season; guides*) are reached by a footpath from the foot of Water St. Of the four locks, the WEITZEL, finished in 1881, is the oldest and smallest; it is 515 feet long and 80 feet wide. The lock has been out of commission since October 31, 1918. Next to it in the south canal is POE LOCK (1887-96), 800 feet long and 100 feet wide. In the north canal are the DAVIS and the SABIN Locks, longest in the world. Constructed between 1907 and 1919, each is 1,350 feet long and 80 feet wide. Spectators pass from one to another over the ponderous lock gates. The space between the locks is landscaped and provided with resting places.

The four locks, including their approaches, cost \$16,420,000; their annual operating expense approximates \$275,000. Every year 90,000,000 tons of freight, valued at more than \$1,000,000,000, pass through here. Free to all vessels, the locks, which have been operated by the Federal Government since 1881, are capable of handling a boat every 18 minutes. Electricity generated by water power is used for operating all except Weitzel Lock, which is equipped with its own hydraulic machinery. Boy Scouts serve as guides, free of charge, during most of the navigation season.

9. ST. MARY'S RAPIDS, north of, and best seen from, the locks below the International Bridge, rush turbulently between the twin cities over a sandstone riverbed. The rapids, shrunk to one-fourth of their original size through the construction of the locks and canals, drop 20 feet within a mile. Shooting the rapids, once a popular sport, is now a perilous undertaking because of the low water. Large rainbow trout are caught here.

10. The INTERNATIONAL BRIDGE, foot of W. Portage Ave., erected in 1887, stretches 3,607 feet across the American locks, the St. Mary's Rapids, and the Canadian locks, connecting the two Soos. One of the largest jackknife spans in the world, the International Bridge, used only by railroads, combines both the swing and bascule types. The bascules, over the third and fourth American locks, were installed in 1913.

11. The EMERGENCY DAMS in the river channel west of the locks are used in case of damage to lock gates. They can be set across the two canals by means of large derricks, stopping the flow on the four locks in four or five hours.

12. FORT BRADY (*open daylight hours*), South St. and Ryan Ave., is one of the smallest army posts in the United States. It covers 75 acres, housing one battalion of infantry, and is the headquarters for all CCC camps of the Upper Peninsula. The fort was reconstructed in the early 1890's on the site selected by General Philip Sheridan.

13. The OLD JOHNSTONE HOME (*private*), 413 Water St., was erected in 1795 by John Johnstone, pioneer fur trader. Built with walls of cedar posts, it was later covered with clapboards and painted red; at the rear of the gabled roof are dormer windows. The structure consists of a single large room, only a part of the original house. Still standing is a remnant of the big fireplace.

14. The POWER HOUSE (*open 8-4:30 Mon.-Fri.; tours*) of the Michigan Northern Water Power Company, on Water Power Canal near Portage Ave., nearly a quarter-mile long, is constructed of stone blasted in building the canal. Machinery in the power house develops 57,000 horsepower, used mainly by the Union Carbide Company plant.

15. The SCHOOLCRAFT HOUSE (*open by permission from Union Carbide Company*), on the Union Carbide Company grounds at E. Portage Ave. and Barbeau St., was once used as an Indian agency. It is a long, rambling two-and-a-half-story building, covered with siding and painted yellow. The house was built in 1826-7 by Henry R. Schoolcraft, first official Indian agent at the Soo, who wrote here some of the books that later served as a basis for Longfellow's *The Song of Hiawatha*. At present, the building is not in use, and its windows are boarded up. The original Colonial design was obliterated many years ago by extensive remodeling.

POINTS OF INTEREST IN ENVIRONS

Brimley State Park, 15 m., Bay Mills Indian Mission, 19 5 m., Marquette National Forest, 21 5 m. (*see Tour 18*); Neebish Island, 24 m., Dodge Munuscong State Park, 24 m., Les Cheneaux Islands, 37 m., Drummond Island, 61 m. (*see Tour 17*), Rogers Monument, 43 m. (*see Tour 16*).

St. Ignace

Railroad Station: McCann and State Sts. for Duluth, South Shore & Atlantic Ry.
Bus Station: Traveler's Hotel for Great Lakes Motor Bus, Hiawatha Trails, Mackinac Motor Bus, and McGregor's Bus Lines

Airport: Mackinac County Airport, 2 miles N. on US 31, ½ mile W. on marked road; no scheduled service.

Taxis: 25¢ in town.

Piers: State Ferry Dock, State St., for State ferry to Mackinaw City and Arnold Transit Co. steamer to Mackinac Island; Duluth South Shore & Atlantic Ry. dock, S. of Ferry Dock, for Detroit & Cleveland Line, and Mackinaw Transportation Co. for railroad service and winter ferry service to Mackinaw City; speedboat docks N. of Ferry Dock for Mackinac Island Service.

Traffic Regulations: Prospect is a one-way street uphill; 2-hour parking limit on State St in summer; free parking at post office and speedboat docks; no traffic lights; State St. is principal stop street.

Accommodations: 4 hotels; rooming and boarding houses; tourist cabins on US 31 and US 2.

Information Service: Booth at City Hall, on State St., two blocks N. of Ferry Dock.

Motion Picture House: 1.

Swimming Straits at W. Moran Bay along miles of sand beaches; Rabbit's Back Peak Beach.

Golf: St. Ignace Golf and Country Club, 2 miles SW. of city on US 2, 9 holes, greens fees, 50¢ a round, \$1 a day.

Athletics: Ball Park, McCann and Chambers Sts.

ST. IGNACE (630 alt., 2,109 pop., 70 per cent of French descent), second oldest settlement in Michigan, is at the threshold of the Upper Peninsula, the stepping-off place to the outposts of the North. With outreaching horns along East Moran Bay, it lies in a thin crescent to the north and south against a cyclorama of sharply rising hills to the west. Eastward, facing it across the bay, is Mackinac Island. To the south, with the State ferries steaming across the bottle-necked Straits of Mackinac separating the two ports, is Mackinaw City, on the upper tip of the Lower Peninsula.

Seen from a ferry deck, Point St. Ignace appears first, jutting southward into the Straits, the dark green of thickly growing pines and cedars softened by lighter touches of greensward. Small homes are visible through the trees. Within the harbor, with its fishing boats and loading docks, the aspect changes. To the north along the shore are the unpretentious homes of fishermen in the French section, and along

the highway, tourist homes. The solid bulk of the white State Ferry Dock, with its loading elevator, stands out above the long black piers of coal, railway, and freight docks to the south. Above and on both sides of the business district rise the hills of the residential terrace, the houses screened by mixed forest growths.

The semicircle of the bay is more pronounced when viewed from Portage Street, which runs along a bluff 50 feet above the main street. From here the northern tip curves back inland, with its natural hook augmented by rows of piles that once supported additional docks and sawmills. Near by is the high black smokestack of a fish-box factory.

State Street is the main thoroughfare. With a sidewalk only on the inland side, the street curves crookedly with the shore line for more than four miles. Along this street in summer, swarthy sailors and fishermen in dungarees and boots rub shoulders with sunburned tourists in slacks and shorts. The railroad ferries handle large volumes of freight, and, at the State Dock, crews are intent on keeping the automobile traffic moving across the Straits. In the waters that lap the shore side of the street is an endless traffic of fishing tugs, ferry boats, and speedboats.

In the winter, St. Ignace is like an outpost of former days. Snow brings horse-drawn sleighs and dog teams, two huskies abreast, padding along the sidewalk, as the driver balances lightly on the sled. The diminished population attends the one motion-picture house; four schools and five churches satisfy the educational and religious needs. Intensive Saturday-night celebrations are a carry-over from the days of the lumber camp and the old French 'fur night' spree.

Although the first white man, Jean Nicolet, came here in 1634, followed by others seeking riches in the fur business, the town was not founded until 1671, when Father Jacques Marquette built a mission chapel. In 1679, La Salle's *Griffon*, on its way to Green Bay for furs, put in at St. Ignace and on the return journey disappeared, without a trace, somewhere near the Straits (*see Hessel, Tour 17*). At that time Fort de Buade had already been established by French military authorities to protect Marquette's mission, but the exact date of its erection is not known. A garrison of 200 soldiers served under Villereys (1681-4), Durantaye (1684-90), Louvigny (1690-94), and Cadillac (1694-1701). The original name of the fort was soon replaced by the more widely known Michilimackinac of the Indians. When Cadillac left to take command of the new fort at Detroit, he took most of the Indians, as well as the garrison, with him, leaving the place practically abandoned except for the missionaries. The last priest, feeling there was no work to be done in such a dreary outpost, burned the chapel in 1706 to prevent its desecration. From that time on, military activity in the Mackinac country centered at Mackinaw City (*see Tour 11*) and later at Mackinac Island (*see Mackinac Island*).

Early in the eighteenth century, fishermen came here from Canada, on the heels of the fur traders, and, in spite of their precarious existence, clung tenaciously to the peninsula, setting their nets for white-

fish and trout. Fishermen were still here in 1834, when the Jesuits were again attracted to St. Ignace, and a new church was built. The community emerged from the outpost class, when railroad ferry service across the Straits was inaugurated in 1881. Coincidental with the coming of the railroad was the establishment of the iron smelting furnaces and the rise of the lumber industry.

In 1882, the county seat was moved here from Mackinac Island; in the same year, St. Ignace was incorporated as a village and, a year later, as a city. Although the furnaces were discontinued in 1900 and the lumbering industry disappeared soon after, the city's favored location as the entry port to the Upper Peninsula helped it to maintain a steady growth, when other lumbering centers were fading into oblivion.

Today, St. Ignace has seven major fishing companies in addition to numerous individual boats. Rail shipments of fish for 1936 were more than 2,000,000 pounds, whitefish and trout composing the bulk of the business. The only sawmill left in the city—a fish-box factory employing six men during the season—supplies boxes for the majority of shipments. Except for lake traffic employment and the tourist business, fishing is the mainstay of the populace.

POINTS OF INTEREST

ST. IGNATIUS CHURCH, Spring and Church Sts., built in 1904, is a red brick structure of modified Gothic design, with a two-stage tower and a steeple. Organized in 1837, the church is known for the **PAINTING OF ST. IGNATIUS**, for whom the city was named. The canvas represents St. Ignatius Loyola, one-time commander-in-chief of the Spanish Army (1521), renouncing the world to collect the religious group with whom he founded the Jesuit order—the Society of Jesus. The artist is not known.

INDIAN VILLAGE (*open 7 A.M. to 10 P.M. daily during summer*), SE. corner State and Marquette Sts., built in 1926, is a small settlement patterned after the Indian encampments at St. Ignace during the seventeenth and eighteenth centuries. It consists of five tepees and four wag-on-a-gons (corrupted to wannigans), representing Indian council houses, rectangular in shape, made of woven birch and cedar bark, without windows or floors; the roofs are held down by stones. The huts and curio shop are of logs, those used in the shop having been transported from an old Indian home in Hessel (*see Tour 17*). During the summer, the Indians weave baskets, mats, and other articles. The Indian families, who live in the log huts throughout the year, are of Chippewa stock, mixed with strains from the Ottawa tribes.

MARQUETTE PARK, NW. corner State and Marquette Sts., small but carefully preserved, is the **SITE OF THE SECOND GRAVE OF FATHER JACQUES MARQUETTE**, the Jesuit missionary-explorer who did so much to make settlement of Michigan possible. Marquette, born in France in

1637, died in 1675 near Ludington (*see Tour 5*), where he was buried by his Indian companions. Honoring his wish 'to return to his little chapel in the Straits,' Indian friends disinterred his remains and, in 1677, reburied them underneath the floor of the log chapel at St. Ignace in which he had preached. After the mission was burned in 1706, the location of his grave was unknown until 1877, when it was accidentally discovered. A marble statue was erected over the site, and a few of the bones were sent to Marquette College in Milwaukee, Wisconsin.

The RUINS OF FORT DE BUADE, on a hill on Fort St. back of Marquette Park, are two-and-a-half centuries old. Still visible, although the stockade itself has long since crumbled, are the outlines of the ancient earthworks. A part of the area was cleared decades ago, and some farming and gardening were done here, but the northeast redoubt and much of the earthen parapet are still distinguishable. A Federal appropriation of \$6,000 was made in 1938 to restore the fort.

POINTS OF INTEREST IN ENVIRONS

Castle Rock vantage point, 3 *m*, Fort Algonquin, Indian relics, 4 *m*., Rabbit's Back Peak, rock formation, 5.5 *m*. (*see Tour 16*).

PART III

Tours

Tour 1

Detroit—Ypsilanti—Coldwater—Sturgis—Niles; 183 m. US 112.

Roadbed hard-surfaced except for 18 miles of gravel east of Niles.

Michigan Central R.R. parallels route between Detroit and Saline, Lake Shore and Michigan Southern R.R. between Quincy and White Pigeon.

Usual accommodations throughout.

Between Detroit and Coldwater, US 112 follows the old Chicago Turnpike, until 1700 a part of the Great Sauk Trail. Extending from Green Bay, Wisconsin, to the Detroit River, this was the most traveled Indian route across the territory, and one of the most important in the Great Lakes region. Along this trail the Potawatomi journeyed to Detroit to collect subsidies from the British, who, unlike the French, were forced to pay for Indian friendliness; widened and improved in 1825 by the United States Government, it accommodated the westward movement of pioneers. Archeological findings along the route have led some authorities to conclude that the district was once the home of the mound builders; but whether these earlier inhabitants were of a different and, as some believe, a superior race, or were merely the progenitors of the tribes encountered by the pioneers, is a matter of conjecture. The region is primarily agricultural, with a scattering of industrial communities. The Irish Hills, with their panorama of lakes and woods, draw many vacationists, and recreational opportunities are numerous along the entire way. Century-old houses, their solid construction indifferent to the passing years, make the route especially attractive to the visitor interested in architecture.

DETROIT, 0 m. (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 12 (*see Tour 2a*), US 16 (*see Tour 4a*), US 10 (*see Tour 5a*), US 25 (*see Tour 9b*), and State 53 (*see Tour 10*).

West of the city hall in Detroit, US 112 follows Michigan Avenue.

DEARBORN, 9.5 m. (600 alt., 50,358 pop.) (*see Dearborn*).

Between Dearborn and Ypsilanti the route is intersected by many highways that carry the heavy traffic of the Detroit metropolitan area.

INKSTER, 13 m. (634 alt., 4,440 pop.), is composed almost entirely of the homes of workers employed in the factories of near-by cities. The village was hard hit by the depression, and hardest hit of all were the Negroes who had settled here in large numbers during the 1926-7 period of industrial expansion in the Detroit area. Purchases had been on the installment plan, and many households were equipped with vacuum cleaners, refrigerators, and washing machines. The con-

sequences of this tenuous ownership were disastrous. Shortly after the depression set in, the community was without financial resources; street lights were turned off, and police protection abandoned. Henry Ford established soup kitchens and gave many of the Negroes work at 12½¢ an hour, plus a credit card for purchases at the Ford store, paid off eventually by the recipient's labor. The village is now (1939) in fairly good financial condition; lights were turned on early in 1937, and individual credit is again obtainable.

THE ELOISE INFIRMARY AND ELOISE HOSPITAL (R), 15 m., are maintained by Wayne County. Consisting of 50 red brick buildings, set in the spacious lawns of a productive 479-acre farm, Eloise houses 3,634 psychopathic patients and 3,988 infirm cases. It is a far cry from this modern psychopathic hospital to the old Black Horse Tavern, where a few feeble-minded persons, cared for at public expense, were confined in box stalls as late as 1841 (*see Social Institutions*).

WAYNE, 17 m. (662 alt., 3,423 pop.), named for the Revolutionary War hero, General 'Mad Anthony' Wayne, is faced with an awkward problem: if it ever becomes a city, it will lose its library. The WAYNE COUNTY LIBRARY, 3612 N. Washington Ave., which also serves as a community center and clubhouse, is supported by the county. Since it is illegal for the county to maintain libraries in cities, Wayne prefers to remain a village. This community, settled in 1836, is advantageously situated on an old, heavily traveled highway near the recently developed industrial area of west-side Detroit. It is a lively, pleasant village with several industries of its own, including aircraft manufacture.

The last man to be hanged legally under Michigan Territorial or State law was a Wayne innkeeper named Simmons, who, in a drunken rage, murdered his wife in 1829 (*see Downtown Library, Detroit*).

YPSILANTI, 29.5 m. (713 alt., 10,143 pop.), with 22 industries and the oldest teacher-training institute west of the Alleghenies, is far enough from Detroit to have escaped being overshadowed. Its educational and manufacturing interests coexist without friction, and the pleasant city still retains its long-established position as a farm trading center. A network of improved highways converges upon Ypsilanti, and its main street, Michigan Avenue, carries an endless stream of through traffic. A stone's throw from this busy, noisy thoroughfare, the city's residential sections climb wooded hills bordering the peaceful Huron River Valley.

Ypsilanti was a French trading post in 1809, with morals and manners that did not err on the side of gentility. Permanent settlers came in 1823. A clergyman visiting the community in 1829 found a negative interest in religion and a positive interest in liquor. As a result of his efforts in behalf of temperance, a local distillery was converted into an ashery for the manufacture of potash. The city's early reputation was not improved by an incident of the 'Cholera War' of 1832. A quarantine had been established three miles east, to prevent wayfarers from entering plague-ridden Detroit, but one stagecoach driver eluded

the guards and galloped toward Detroit in a volley of gunfire. Although no one was injured, unfavorable publicity made Ypsilanti widely known as a place to be avoided by travelers. However, the period of expansion that followed the coming of the railroad in 1838 allowed less time for high jinks, and the village achieved a tardy but genuine respectability.

The city was named by Augustus Woodward, first Chief Justice of the Territorial Supreme Court, for General Demetrios Ypsilanti, a young Greek hero. Early in the nineteenth century, Ypsilanti distinguished himself by holding the entire Turkish Army at bay for three days, with his command of 300 Greeks, and then escaping through the enemy lines without the loss of a single life.

The \$30,000 YPSILANTI MONUMENT, Cross and Summit Sts., is composed of a column supporting a bust of the patriot. The bust was made in Athens by Christopher Natsos, who also designed the Greek monument to the Unknown Soldier. The Ypsilanti Monument stands beside a land mark, the YPSILANTI WATERTOWER, built in 1899 as part of the city's first water system.

The MICHIGAN STATE NORMAL SCHOOL, dedicated in 1852, was sought by several communities but awarded to Ypsilanti upon the offer of acreage, a principal's salary, and a \$13,000 structure. The campus, 107 acres on Brower St. between Forest and Summit Sts., now contains ten buildings. The State Normal prepares its students for every branch of public-school work. Among the buildings on the campus is PIERCE HALL (R), on Campus Walk, named for John D. Pierce, first State Superintendent of Public Instruction (*see Social Institutions*). In this building is housed an excellent ANCIENT LANGUAGES LIBRARY of 600 volumes. The SCIENCE BUILDING, on West Forest Avenue, houses three departments, several laboratories, an open-air observatory, a zoological collection, and a herbarium with mounted specimens of 4,000 plants from the United States and Canada. The most impressive building in Ypsilanti is PEASE AUDITORIUM, on Brower St. between Forest and Cross Sts., a massive building with Corinthian columns of glazed terra cotta; it contains, in addition to the Conservatory of Music, a concert hall with a seating capacity of 2,000.

The college contributes to the entertainment of the community several annual events that have become a part of college tradition. Since 1922 the Bach Music Festival, held the middle of March, has been one of the major events in the city. At the Spring Festival in early June, a theme or story is enacted in pantomime and dance; also in June are the Commencement exercises, first held in 1854, and the Baccalaureate exercises, inaugurated in 1896.

Ypsilanti is rich in structures of architectural interest, many of them built before 1836. The building of the FIRST PRESBYTERIAN CHURCH, N. Washington and Emmet Sts., was started in 1835, at a time when local carpenters usually worked with the aid of whiskey or not at all. In spite of all inducement, workers were recruited with difficulty, and, when the partly completed frame was blown down by a gust of

wind, townspeople, more in sympathy with the wind than with religion, sent up a shout of approval. Thereafter, not more than three or four men could be found to continue the work, and its completion was long deferred. This building was later replaced by the present two-towered red brick structure.

The LADIES' LITERARY CLUBHOUSE, 218 N. Washington St., is a Greek Revival structure designed by Arden Ballard and built in 1842. One-and-a-half stories high, it is dignified by a portico with four heavy square columns, the whole painted white and in excellent condition. The walls are constructed of brick on a field-stone foundation; the one-story addition in the rear is of a later date.

The BREakey FARMHOUSE, 1885 Packard Road, was built in 1835 by Isaac Newton Conklin and at present is owned by Dr. James R. Breakey, who rescued the house from impending collapse and planned its restoration. It is a one-and-a-half story Greek Revival structure, with clapboard walls, flush siding, and four square columns in the portico. The interior trim and the stairs are of walnut.

The BALLARD HOUSE, 125 N. Huron St., built in 1830 and until recently occupied by the Breakey family as a town house, is one of the temple houses constructed during the Classical Revival period. The four columns of the portico are Roman Doric, rare in Michigan, and the front entrance has two small inset Doric columns. An addition to the house was built about 1845; in 1925 another section was added, giving the structure 21 rooms and a total length of 92 feet. The stairway in the oldest part of the house has solid walnut spindles, newels, and handrail.

The HUTCHINSON HOUSE, 616 N. River Blvd., between Oak and E. Forest Sts., was built about 1900 by Shelly M. Hutchinson, an enterprising newspaper publisher. Hutchinson was one of the men who introduced the trading-stamp scheme that spread for a time to all parts of the country and made a fortune for its promoters.

CLEARY COLLEGE, at Michigan Ave. and Adams St., a business school established in 1883, has both technical and cultural subjects in its curriculum. It offers one- and two-year courses, as well as a four-year course with a degree. Seven hundred students were enrolled in 1938. Cleary College Alumni Day, a part of the graduation program, is usually held in the middle of June.

At 33.5 *m.* is a junction with US 23 (*see Tour 11b*).

SALINE, 40 *m.* (816 alt., 1,009 pop.), in the pastoral country at the edge of the Irish Hills, was settled in 1824. It is named for salt springs, which were prized by the Indians. The SALINE GRISTMILL (L), on the banks of the Saline River west of the city, was recently moved a few yards from the location it had occupied since before 1849, to allow for the widening of the roadway. Purchased by Henry Ford, the mill now extracts oil from soy beans grown in the surrounding country. The oil is used in finishing Ford cars. The mill is one of more than a dozen small units in Ford's State-wide experiments in industrial decentralization. To farmers willing to raise soy beans, seed is advanced

by the company, the investment being repaid when the crop is harvested.

1. Left from Saline on County 437 to a junction with a graveled road, 2 *m.*; R here to the SALINE VALLEY FARMS (*open by permission*), 3 *m.*, a co-operative community founded in 1932 by Harold S. Gray. There are 16 houses, a co-operative store, a filling station, a greenhouse, a woodworking shop, and a cannery. Of 600 acres of good land, 40 are devoted to orchards and 40 to gardens. Produce is sold in near-by communities.

2. Left from Saline on County 453, called the Macon Road, is MACON, 8.5 *m.* (about 250 pop.), in a vast area owned by Henry Ford and devoted largely to soy-bean production. The PENNINGTON SCHOOL, southeast corner of the cross-roads, was built in 1851 at a cost of \$450. In 1931, after a long period of service as a storeroom, the cobblestone structure was bought by Henry Ford, who restored it to its original purpose. Furnishings are of black walnut cut from trees felled on the grounds. Typical of another day, the rows of seats all face a large wood-burning stove standing in the center of the room. There are about 40 pupils in the 12 grades; the method of instruction, essentially tutorial, is similar to that used by the Bell Lancaster schools of England, with pupil helpers. At the end of an avenue of trees east of the school is the PENNINGTON HOUSE, a one-story modified-Colonial dwelling of the 1850's, recently restored by Mr. Ford. Of clapboard construction, the house has a gabled center, with wings on each side. Much of the original furniture, returned by various owners, is back in its old place.

CLINTON, 52 *m.* (823 alt., 1,026 pop.), incorporated as Oak Plains in 1838, is surrounded by fertile farm lands. Woolen mills are its oldest industrial units. A simply designed building of 1844 is the FIRST CONGREGATIONAL CHURCH, Tecumseh and Franklin Sts., two blocks left of US 112. The timbers and siding used in this white frame church were obtained from the oaks and whitewoods felled when the site was cleared.

Left from Clinton on State 52, which follows the course of the River Raisin, is TECUMSEH, 5 *m.* (795 alt., 2,456 pop.), the first settlement in Lenawee County. Tecumseh, incorporated as a village in 1837, was named for the great Shawnee chief. Primarily a trading center for a celery-raising area, it also engages in the manufacture of foundry products. Near the north bank of the River Raisin is a large boulder (L), erected in 1909 to mark the SITE OF THE FIRST HOUSE IN THE COUNTY, erected by Musgrove Evans and his wife, Abi, on June 2, 1824. A landmark since 1833, ST. PETER'S EPISCOPAL CHURCH (R) is the oldest Episcopal church building continuously in use west of the Allegheny Mountains. A frame structure with Doric portico and pointed openings, it appears today much as in the days when the frontier began at its doorstep. Among others, President Andrew Jackson, Henry Clay, and Governor Wise of Virginia contributed funds for the erection of this church in response to solicitations from its energetic founder, the Reverend William Nardissus Lyster. On the broad, shaded streets of the city are several handsome houses, some very old and excellently preserved. The McALLISTER HOUSE, 501 W. Chicago Blvd., built by James McAllister in 1839, has a recessed Doric *in antis* portico, with windows to the floor. The BREWER HOUSE, 401 W. Chicago Blvd., is owned by Mrs. P. W. A. Fitzsimmons, a granddaughter of the original owner. Completed in 1832, it is semi-Classical in design, with a cupola similar to those used on sea captains' houses in Massachusetts. The interior is finished in black walnut.

West of Clinton is the central part of the IRISH HILLS, so named by the Reverend Mr. Lyster because the gentle slopes, with their woods

and sparkling lakes, recalled to him the countryside of his native land. Suggestive also of the 'old country' is a little wayside shrine.

At 61 *m.* is a junction with State 124.

Right on State 124 to the WALTER J. HAYES STATE PARK, 1 *m.*, a 400-acre playground with frontage on WAMPLERS and ROUND LAKES. Wampplers Lake, a large resort settlement, has bathhouses and amusement facilities. The park, a popular camping and picnicking spot, has been improved by CCC workers.

TWO OBSERVATION TOWERS (*adm.* 10¢), 63 *m.* (L), command a panorama covering many square miles of the rolling Irish Hills. On clear days at least a score of lakes are visible from the tower tops (alt., 1,284 at base, 1,358 at top). There are refreshment stands and a dance pavilion.

The ST. JOSEPH'S ROMAN CATHOLIC CHURCH (R), 63.5 *m.*, is an enlargement of a small stone chapel built in 1854 by Irish settlers. In the old churchyard, which has been left undisturbed, are the graves of the Irish pioneers and their children. Father Joseph Pfeffer, the parish priest, has constructed on a winding path near the church a Via Dolorosa, which reproduces as closely as possible the original Way of the Cross in the Holy Land. The distances between Stations are proportionately correct, and in several instances—the Fifth and Sixth Stations for example—the backgrounds are faithful reproductions of the original scenes.

CAMBRIDGE JUNCTION, 65 *m.* (25 pop.), referred to as the western gateway to the Irish Hills, was originally the intersection of the Chicago Turnpike (the Great Sauk Trail) and the Monroe Turnpike from Lake Erie. The WALKER TAVERN (*adm.* 15¢), erected at the crossroads (R) in 1833, has massive beams of rough-hewn oak and walnut. There was no settlement here when the spacious tavern was built; it stood alone in the deep forest, a resting place in the long stagecoach journey between Chicago and Detroit. Among many distinguished guests, it housed Daniel Webster and Harriet Martineau (1802-76), the English writer; in one of its rooms James Fenimore Cooper wrote notes for his story, *Oak Openings*, while 'his Indians lodged like dogs in a kennel' in a smaller room. The whitewood floor boards of another room retain a dark stain of blood; this is the 'murder room,' unused since the night long ago when there arrived at the inn a gold-laden speculator and cattleman bound for the West. Without identifying himself, he spent the evening in the taproom with his fellow travelers. In the morning, the host found his room in disorder and bedaubed with blood. Beneath the shattered window, in a crumpled heap on a flower bed, lay the traveler, murdered and robbed of his money belt. The mystery of the crime, which was never solved, was increased when, some months afterward, the ground beneath one of the giant oaks in the inn showed traces of digging, presumably done by someone who assumed the money belt had been buried there.

Shadowed by the large oak in the inn yard are nine POTAWATOMI GRAVES. In 1840, the upper branches of this oak were leveled off to a

height of 25 feet, to support a speaker's platform for an outdoor meeting of the Whig party.

In 1856, Walker Tavern became the home of Francis Dewey, a former stagecoach driver. The tavern and the stagecoach shed, restored by their present owner, the Reverend Frederick Hewitt, are in excellent condition; of particular interest are the taproom, its old bar scratched and worn from rough usage; the barber shop, displaying the equipment used in earlier days; the log-joisted kitchen, with its pioneer equipment; and the completely furnished spinning room.

Across the road (L) is the three-story, 35-room WALKER BRICK TAVERN (*adm.* 15¢), built in 1854 to accommodate the great increase in travel along the old Chicago Turnpike. Its taproom was the scene of many rousing fights, and dances were frequently held in its large ballroom. A show room is one that once was occupied by Henry Ward Beecher. Reverend Hewitt owns this building also.

At 67 *m.* is a junction with a graveled road.

Left on the graveled road to a junction 15 *m.*; R. here to another junction, 24 *m.*; R. here to a white farmhouse, 28 *m.*, with a windmill beside the porch; L. on a farm driveway (*adm.* 10¢) to PROSPECT HILL, 31 *m.* (1,266 alt.), one of the highest points in the Irish Hills, once used by the Indians for building signal fires. A favorite picnic place of the early settlers, it is provided today with fireplaces and tables. From the crest of the hill, where even on the hottest day a breeze stirs the leaves of the oaks, the spreading panorama is one of the most beautiful in the State. Farmhouses and sharp-angled fields, winding roads skirting the shores of the many lakes that sparkle in the trough of the hills, add detail and contrast to the forested slopes.

At 72.5 *m.* is a junction (L) with US 127 (*see Tour 13b*), with which US 112 is united through SOMERSET, 74.5 *m.* (100 pop.), and SOMERSET CENTER, 76.5 *m.* (300 pop.), two small crossroads settlements.

MOSCOW, 81.5 *m.* (300 pop.), is composed of a score of buildings bordering the highway, in the valley of the Kalamazoo River; other houses dot the adjacent slopes. The Kalamazoo, a mere trickle now, was at one time a river to respect; stagecoach drivers made the Moscow ford a stopping point on the long journey between Chicago and Detroit. Before the village became known by name, travelers designated the place as the 'old Chicago Turnpike at the Kalamazoo River.' As late as 1829, a letter of a type commonly seen in those days—stampless, folded, and sealed with wax—reached its addressee, although it bore only the above inscription. A rough log tavern erected at the ford in 1831 was replaced 20 years later by the square, two-story clapboarded MOSCOW TAVERN (R), which has remained virtually unchanged. The taproom is now an antique shop, where bar accessories of turnpike days are for sale. The handmade mahogany and pine bar is exhibited in the basement.

A MEMORIAL BOULDER (R), 89 *m.*, is dedicated to Father Gabriel Richard, who secured Congressional funds in 1825 for the survey of the Great Sauk Trail, now US 112.

JONESVILLE, 91 *m.* (1,106 alt., 1,316 pop.), celebrated its 100th anniversary in 1929. The settlement came into existence at this point, because it was the only place in a ten-mile stretch where the St. Joseph River could be forded. A few small industrial plants supplement agricultural activities. The first brick building in Hillsdale County, the MUNRO HOUSE, southwest corner of Maumee and South Streets, was erected in 1840. It is a simple, two-story structure with a Classical gable and Greek Doric porches at the wings and entrance. Each of its many rooms has a fireplace. The small park (R) in the center of the village was formerly the site of the Hillsdale County Courthouse and Jail, which was torn down after the judicial seat was removed to Hillsdale (*see below*). The GRACE EPISCOPAL CHURCH (L), facing the park, is the second-oldest Protestant Episcopal church in the State. Completed in 1844; it has Classical cornices and pointed windows and entranceway; interior furnishings are of walnut with ivory trim, and the small altar, also of walnut, is set against frescoed panels. The original black-walnut pews are still in use.

Left from Jonesville on State 9 is HILLSDALE, 5 *m.* (1,090 alt., 5,896 pop.), settled in 1834. The growth of Hillsdale followed the pattern of many another village in southwestern Michigan, until the 1840's when three gifts of fortune came its way: the first railroad in the Territory bestowed a station upon it; the Free Will Baptists gave it a college; and the legislature made it a county seat.

The Free Will Baptist organization had established a small school at Spring Arbor in 1844—the first coeducational college in the State. Stress was laid on the rural location, 'removed from the temptations and distracting influences of a large village, yet with easy access via stage line to Jackson.' But the bucolic setting palled, and sentiment at Michigan Central College, as it was then called, veered in favor of a larger village with railroad facilities. Hillsdale heard the news, joined in the lively bidding, and carried off the prize despite the opposition of Spring Arbor's outraged citizenry. Resistance in Spring Arbor was so determined that one of the trustees, when he set out to deliver the college records to Hillsdale, had to hide them under straw in his wagon. In 1853, ground was broken on an elevation on the east bank of the St. Joseph River for the HILLSDALE COLLEGE buildings. These were wiped out in 1874 by a disastrous fire and replaced by brick structures, except for EAST HALL, lone survivor of the original group, which still stands. The trees on the 25-acre campus were planted by students more than half a century ago. At one time the college asserted that it was the 'cheapest American college,' and the statement seems reasonable, as incidental expenses for the entire term were \$3.50 for men and \$2.25 for women. Board cost less than \$2.00 a week, and rooms in East Hall rented for 29¢ to 41¢ a week. Coeducation presented certain problems to the early faculty; and 'ladies and gentlemen' were not allowed to 'walk or ride together without special permission from the President, or Principal of the Female Department.' A liberal-arts college, Hillsdale was the first in Michigan to limit its registration, which stands at 500, evenly divided between men and women.

The HILLSDALE COUNTY BUILDING, on Howell St. (State 9), between McColum and Bacon Sts., was erected in 1898 at a cost of \$100,000, the successor of two previous structures. It is designed in the Renaissance manner, with a clock tower. The railroad from Monroe to Hillsdale, which the State completed in 1843 after five years of construction work, cost \$1,400,000. Three years later it was sold to a private company for \$500,000. It was extended to Chicago and is now a part of the New York Central System.

QUINCY, 102 *m.* (1,000 alt., 1,265 pop.), derives most of its income from a cereal-foods and milling plant—the outgrowth of the first flour

mill established in 1863—and from a Portland cement plant, which uses large local deposits of marl and clay. The *Quincy Herald*, a weekly newspaper, has been published continuously since 1875. The first frame school building, on Bennett Street, was erected in 1838; it is now privately owned. In the MUNICIPAL PARK, on North Main Street, the businessmen of Quincy provide open-air entertainments each week during the summer; on East Chicago Street is the MUNICIPAL TOURIST PARK. Several near-by lakes attract a considerable number of summer vacationists to the village.

Left from Quincy on County 555 to a junction with a township road, 2.3 m.; R. here to MARBLE LAKE, 3.1 m., first of a chain of 21 lakes, with fine swimming, fishing, and boating. From these lakes is taken the marl used by the WOLVERINE PORTLAND CEMENT PLANT, on the north end of Marble Lake.

The name of COLDWATER, 109 m. (982 alt., 6,735 pop.), the seat of Branch County, is probably the translation of an Algonquian term describing the lake waters in the surrounding district. The first house in Coldwater was a rough log structure (1830) on the Chicago Turnpike, which crossed the Coldwater River at this point. When it became known that the turnpike would be surfaced, a two-story inn was constructed, and by 1832 the settlement was large enough to warrant the platting of a village.

The handling of the first criminal case by local authorities brought the village wide notoriety and made it the butt of many a ribald joke. A man found guilty of stealing a cow bell was sentenced to 'bend over a huge log and let each person present give him a severe blow upon the rotundity of the body with a piece of board four feet long and six inches wide.' Apparently the whole town turned out, and the culprit was boarded almost to death. Several private citizens, who took part in the beating, afterward found themselves defendants in a civil suit brought by the victim. For several years litigation moved from one court to another in the Northwest, becoming known throughout Michigan as the Coldwater 'cow bell suit,' until, as far as can be learned, the case was dismissed.

During the era of the Underground Railroad, Coldwater was an active station. It was the claim of townspeople that 'no slave was ever captured in the vicinity of Coldwater.'

Incorporated in 1837, the village grew rapidly and was chartered as a city in 1861. Since the Civil War, its expansion, though more gradual, has proceeded steadily. Today it is a trading and supply center for the surrounding agricultural area; its industries include the manufacture of cement, furnaces, castings, marine engines, shoes, flour, and sports clothes for women and children.

The COLDWATER PUBLIC LIBRARY (L), Division and Chicago Sts., has 13,000 volumes for general use and a valuable private library left to the institution in 1884 by H. C. Lewis, a financier of Civil War days. On the first floor of the BRANCH COUNTY COURTHOUSE (L), Chicago and Division Sts., in use 50 years, is a heterogeneous col-

lection of curios pertaining to local history and development. The finest of the city's three parks is WATERWORKS PARK, between Bennett and Sprague Sts. on Coldwater Creek (*playgrounds, swimming pool*). The COLDWATER OPERA HOUSE, 16 S. Hanchett St., built in 1882, served until recently as a community hall and is now a motion-picture theater. Today most community affairs are held in the COLDWATER ARMORY, on West Chicago Street, a red brick edifice with a seating capacity of 1,000.

Coldwater is at a junction with US 27 (*see Tour 12c*).

BRONSON, 121 *m.* (1,000 alt., 1,651 pop.), developed around the hunting lodge and tavern built by Jabez Bronson in 1828, in what then was a wilderness. When the village became the first seat of Branch County, Jabez Bronson was the law and his tavern the court. Before the convening of court, all liquor was removed to the kitchen; at the close of the session, the room speedily became a taproom again. The BRONSON INN (R) was built in 1880 on the site of the old tavern, which was moved to a farm near the village and converted into a barn.

Judge Bronson and the judge at Hillsdale, in the next county, competed for the marriage business, and each went so far as to imply that marriages performed by the other were not legal. Thus the practice of being married twice began in the community, once by each judge; the second ceremony, insuring the validity of the marriage, cost \$10.

The majority of the settlers who built up the village in the 1870's were Polish immigrants attracted by the fertility of the high, rolling land. The thrift and industry of these people lend validity to the village's claim that it is the 'city the depression passed up.' Unemployment was to some extent curtailed by decreased working hours in all the village's industrial plants; thereby employment was increased almost 20 per cent. Those for whom no steady work could be found were kept busy at odd jobs. Perhaps the most important factor in Bronson's planned security is the seasonal balance in industry; when one concern enters its slack period, others are in their peak months. Twenty unemployed was the all-time high, and this condition was only temporary. Three large industrial plants manufacture metal fixtures, fishing tackle, and electrical equipment for automobiles and aircraft. Smaller businesses connected with regional farming activity are either centered in Bronson or use it as a shipping point.

The Bronson Municipal Band of 25 members, organized in 1892, has given open-air concerts on Wednesday evenings during every summer season since its founding.

STURGIS, 134.5 *m.* (928 alt., 6,950 pop.), occupies a strategic position in a region that supported a large Indian population before the first settler arrived in 1827. Here was the junction of the Great Sauk Trail and the Nottawaseepe Trail. As early as 1825, pioneers coveted the rich Nottawaseepe Reservation, a tract of 73,000 acres in the northern part of St. Joseph County; but not until 1833, at the

close of the Black Hawk War, did the Potawatomi cede the reservation to the Government and allow themselves to be moved farther west.

The value of products manufactured in Sturgis in 1937 was about \$10,000,000; the city ranks second in the State in the making of furniture. The community is tax-free, thanks to the profits from the municipal power plant 17 miles away on the St. Joseph River. The city has a civic orchestra, a women's club, and a Carnegie library. Several annual events are sponsored by various civic organizations, including the Pet Day Parade, the Flower Show in September, and Hospital Day, when children born in the hospital take part in a May-pole dance and parade. Sturgis schools have attracted attention because of the special boys' cooking classes, which began with camp cooking and diets for the sick and have progressed to pastry and general cookery.

FREE CHURCH PARK, on US 112 at S. Monroe St., is on the site of a church built in 1858 by pioneer citizens, who wished to provide a pulpit for ministers whose orthodoxy had been questioned by the churches in which they had been ordained. Anyone was welcome to speak at the Free Church. It was at one time a Spiritualist headquarters, and it introduced motion pictures to Sturgis. When the property came into the city's possession, the structure was torn down.

The STURGIS HOUSE (*private*), 500 W. Chicago Road, built in 1839 by an ancestor of the present owner, has a handmade brick fireplace with a whitewood mantel of distinction. The well-proportioned dwelling, now a tourist home, has low ceilings, chair rails, iron thresholds, and hand-wrought iron latches, highly valued by collectors.

OKLAWN TERRACE, three blocks south of the highway on S. Nottawa St.. 16 acres of terraces, gardens, dells, streams, and falls, was once the city's dumping grounds. The gardens were made by unemployed workingmen, to pay off their light and water bills. A stone pillar, on the northeast corner of US 112 and N. Nottawa St., marks the SITE OF OLD STURGIS INN, once an important stopping place on the Fort Dearborn-Detroit highway.

Right from Sturgis on State 78, through a pleasant lake country colonized by Amish settlers, to a junction with State 7, 8.5 m; L. on State 7 is NOTTAWA, 10.5 m. (200 pop.), which derives its name from that of the Potawatomi chief, Nottawaseepe. Nottawa served as Governor Porter's headquarters, when the Indians of the Nottawaseepe Reservation were sent to a new reserve in Kansas. Today it is a trading center for Amish farmers in Nottawa and Sherman Townships.

In 1847, five Amish families came to this district from Ohio; today there are some 65 families in the community. Essentially conservative, the Amish vary little from the ways and beliefs of their forebears, and they still prefer horses, of which they own many fine specimens, to automobiles. Among the younger people, bright colors occasionally appear, but the customary Amish attire is still plain black dresses and black 'Shaker' bonnets for the women and, for the men, wide-brimmed felt hats and sober black homemade garments, with hooks and eyes instead of buttons. The men wear full, untrimmed beards, which are started just before marriage. The practice of shaving the upper lip dates from the days of the sect's origin in Switzerland, when mustaches were taxed. Ornaments and

luxuries are considered sinful, and the neat homes are bare of carpets, curtains, or pictures.

The Amish observe no holidays. Social life is entirely devoted to church meetings held in private houses; church buildings are considered a worldly extravagance. A German dialect is spoken generally, and German preferences in food prevail. These people are noted cooks, and Amish sausages, hominy, and apple butter are sold in Sturgis and by the roadside. No one has much money, a few have very little; but when disaster comes to any member, all unite to help make up the loss. Life and property are never insured. Amish residents of Michigan made formal protest at Washington in 1937 against the allocation of PWA funds to be used in rebuilding schoolhouses in their district, because the acceptance of loans is forbidden by the tenets of their religion. Conscientious objectors, they refuse to take arms against their fellow men. They are sometimes subjected to injustices by persons who take advantage of the fact that they 'swear not at all' and, consequently, cannot be induced to go to court. Officeholding is likewise proscribed. These canons account for the fact that the Amish take no part in elections. To live at peace with everyone is their ideal.

Ahead from Nottawa on State 7 are CENTERVILLE, 14.5 *m.* (822 alt., 820 pop.), and THREE RIVERS, 21 *m.* (900 alt., 6,863 pop.), at a junction with State 60 (*see Tour 3*).

KLINGER LAKE (R), 141.5 *m.*, is the largest body of water in St. Joseph County. Cottagers obtain water of sufficient force for household purposes by the simple process of thrusting a pipe into the ground. Six beaches afford good swimming, and there are a golf course, a country club, a tavern, and two dance pavilions near the lake.

WHITE PIGEON, 147 *m.* (900 alt., 966 pop.), was named for an Indian chief who, according to legend, saved the village from destruction in 1830, when tribes meeting near Detroit planned to avenge a governmental expropriation. Chief Wahbemme, risking tribal wrath, ran the entire distance from Detroit to warn the settlement. He is believed to have died as a result of the exertion.

At 148 *m.* is a junction with US 131 (*see Tour 14c*), with which US 112 is united to Mottville. At the northwest corner of the junction is a monument (R) marking the GRAVE OF WHITE PIGEON; near by, the State is developing a roadside picnic ground.

MOTTVILLE, 153 *m.* (106 pop.), though scarcely more than a hamlet today, played an important part in the pioneer development of southwestern Michigan. As early as 1827, a sawmill was erected at this point on the St. Joseph River, and lumber was shipped by water to South Bend and other settlements below. The following year, there was an influx of settlers from Crawford County, Ohio, and an enterprising member of the colony established a store, carrying a stock of 'codfish, a keg of tobacco, and five barrels of whisky.' Because of its position on a water route, the village soon became a river-traffic center, with wharves, warehouses, and business places occupying the eastern shore. Shipping in the stream reached its greatest volume between 1840 and 1850, before railroads covered this part of the State. At that period, the community had seven sawmills, a brewery, and numerous lesser industries. In the next decade, however, an unfortunate controversy between civic officials and a railroad company resulted in the

rail line being routed around the village. When railroads destroyed river traffic, Mottville declined swiftly.

UNION, 160 *m.* (150 pop.), a cross-roads trading center, is on Baldwin's Prairie, which is believed to be the bed of a large vanished lake.

At 165 *m.* is a junction with State 205.

Left on State 205 to the Indiana Line, 2 *m.*, six miles north of Elkhart, Indiana (*see Indiana Guide*).

Westward, US 112 follows a graveled route through rolling hill country to NILES, 183 *m.* (800 alt., 11,326 pop.) (*see Tour 3*), at a junction with US 31 (*see Tour 15c*) and State 60 (*see Tour 3*).

Tour 2

Detroit—Ann Arbor—Jackson—Battle Creek—Kalamazoo—Benton Harbor—New Buffalo—(Michigan City, Ind.); US 12.
Detroit to the Indiana Line, 220 *m.*

Roadbed hard-surfaced throughout, three lanes between Detroit and Jackson, two lanes westward

Pere Marquette Ry. parallels route between Detroit and Plymouth, between Paw Paw and Coloma, and between Benton Harbor and Michigan City; Michigan Central R.R. between Ann Arbor and Kalamazoo.

Usual accommodations throughout.

US 12, leaving the city as Plymouth Road, stretches along the course of the old territorial stagecoach route through an agricultural region that contrasts strongly with the crowded residential areas that adjoin Detroit. Between Ann Arbor and Jackson, not a single village breaks the open sweep of the road as it crosses the rolling country.

Section a. DETROIT to JACKSON; 73 m. US 12.

DETROIT, 0 *m.* (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 16 (*see Tour 4a*), US 10 (*see Tour 5a*), US 25 (*see Tour 96*), and State 53 (*see Tour 10*).

PLYMOUTH, 23 *m.* (741 alt., 4,484 pop.), lies north of US 12 on the Rouge River. Settled in 1825 by descendants of the Pilgrims, it is a small industrial city, known for its two air rifle factories and its city and county parks.

Right from Plymouth on Northville Road to the junction with Phoenix Road, 1.5 m.; L. here to the WAYNE COUNTY TRAINING SCHOOL, 2.5 m., the only county-operated institution for the feeble minded in the State. Because the State's institutions for the mentally incompetent were over-crowded (see *Social Institutions*), this school was opened in the fall of 1926 to care for subnormal children in Wayne County. Training is designed to enable the children to return to their community. The institution covers more than 1,000 acres, two-thirds of which are used for farming. There are 38 buildings on the grounds, generally two stories in height and styled in a modern adaptation of the Renaissance.

Ahead on Phoenix Road is the DETROIT HOUSE OF CORRECTION, 3 m., a model institution whose inmates live in attractive cottages surrounded by landscaped grounds. It is the only women's prison in the State.

ANN ARBOR, 37 m. (802 alt., 26,944 pop.) (see *Ann Arbor*).

Ann Arbor is at a junction with US 23 (see *Tour 116*).

At 45 m. is a junction with County 453.

Right on this road, known as Baker Road, is DEXTER, 3.5 m. (862 alt., 894 pop.). The impressive old DEXTER HOUSE (*private*), on a 70-acre plot just west of the village, is in the manner of the Greek Revival, with a high portico and a central stair well. In 9 of the 25 rooms are pilastered fireplaces. The house was built between 1841 and 1843 by Judge Samuel W. Dexter, for whom the village is named. Bees have hived for many years in the six Doric columns across the front.

At 52 m. is a junction with State 92.

Right on this road is CHELSEA, 0.5 m. (921 alt., 2,071 pop.), in an area of great fertility. Once the leading wool shipper in the State, as well as one of the largest produce markets, it is now a small manufacturing village.

At 66 m. is a junction with County 382.

Right on this road is WATERLOO, 5 m. (55 pop.), in an area of moraine and outwash plain, where farming has never been remunerative. It is rich, however, in Indian lore. Common meeting ground of the Great Lakes tribes, the region was traversed by the trails of the Huron, Ottawa, Potawatomi, and Ojibway. The headwaters of streams of the east Huron watershed rise in this region, and, north and east of the village, they form 1,000-acre WATERLOO MARSH, used by the Indians as a connecting link between the Huron and Grand Rivers. In 1860, a flood arose out of the marsh, receding as inexplicably as it had arisen. High above the marshes are SACK RIDER HILL (1,130 ft.), PROSPECT HILL (1,164 ft.), and STUFFER HILL (1,100 ft.), overlooking lowlands covered with maple, elm, and tamarack. Wild life abounds in this area; during seasonal migration, thousands of ducks and geese stop here to rest; sandhill cranes, rare in southern Michigan, haunt the marshes. The Farm Security Administration has purchased for rehabilitation 12,000 acres of submarginal land, upon which recreation centers and wild-life sanctuaries are being established.

At 69 m. is a junction with County 487.

Left on this road is GRASS LAKE, 3 m. (986 alt., 804 pop.), named for the reed-choked lake at its northern border. Formerly engaged in the manufacture of furniture, Grass Lake now depends on dairying and agriculture.

Left from Grass Lake on Wolf Lake Road to a junction, 6 m.; R. here to another junction, 7 m.; L. here to WOLF LAKE, 8 m., one of many small lakes in this area. HIGHTOWER FARM, on the north shore of Wolf Lake, is the home of the leading bishop of the Roumanian Orthodox Church and his household. It was officially designated as the Episcopal Center of the church in July 1937, when a chapel, the first building of a proposed seminary, was dedicated. The

streets of the Vatra Romanesca subdivision have been given the names of Roumanian villages and provinces: Strada Crisana, Strada Muntenia, Strada Dobrega.

JACKSON, 73 *m.* (995 alt., 55,187 pop.) (*see Tour 13a*), is at a junction with US 127 (*see Tour 13a*) and State 60 (*see Tour 3*).

Section b. JACKSON to KALAMAZOO; 66 m. US 12.

Between JACKSON, 0 *m.*, and Kalamazoo, the highway follows roughly the valleys of the Kalamazoo and other rivers, where the fertility of the muck and silt topsoil made farming a profitable enterprise and communities were established at an early date; the second and third generations of settlers in this area were helping to organize the legislature of the State at a time when the North was still a frontier forest zone. The agricultural area west of Jackson produces an abundance of celery, onions, apples, grapes, wheat, barley, and peppermint. Consequently, there is very little unclaimed and untenanted land. Sheep-raising is important enough to warrant the existence of a wool-producers' association.

PARMA, 11 *m.* (985 alt., 613 pop.), settled in 1838, was listed on many old maps as Cracker Hill. At one time there were enough Quakers in Parma to support a meetinghouse, and a few still live in the vicinity.

ALBION, 20.5 *m.* (1,000 alt., 8,324 pop.), is a prosperous industrial community, supporting 30 small plants. ALBION COLLEGE, Huron St. between Porter and Cass Sts., is one of the oldest denominational colleges of the State. Its 12 buildings and 18 acres of campus are surrounded by quiet, shaded streets, lined with neat, unpretentious homes and shrub-bordered gardens. Albion College has an enrollment of 650 students taking courses in the liberal arts, music, painting, and business administration; technical courses are given in co-operation with the University of Michigan. The college is controlled by the Methodist Episcopal Church.

At 23.5 *m.* is a junction with an earth road.

Right on this road to STARR COMMONWEALTH (*open by permission*), 0.5 *m.* (R), inaugurated in 1913 by Floyd Starr, a graduate of Albion College. It is a home for delinquent boys between the ages of 6 and 14. Dispensing with bolts, bars, and guards, the institute has never had a runaway. A program of study, work on the farm, and play serves to instill pride and self-reliance in the boys. The commonwealth is supported by public contributions.

MARSHALL, 31.5 *m.* (1,000 alt., 5,019 pop.), is an attractive rural community, with many frame houses that antedate the Civil War. It was one of the first communities in the Northwest to be systematically platted. Nation-wide attention was focused upon Marshall in 1846, when Adam Crosswhite, a slave who had escaped from Kentucky and had been a resident of Marshall for two years, was seized by slave-hunters. The whole town rose in his support. Not only were Crosswhite and his family freed and sent over the Underground Railroad

into Canada, but the slavehunters were arrested. In 1848, suit was filed against the Abolitionists in the Federal District Court, and a verdict of \$1,295 and costs was rendered against them. The Cross-white case, which helped to bring about the passage of the New Fugitive Slave Bill of 1850, is described in *Uncle Tom's Cabin*.

Marshall is the birthplace of the Michigan public school system. Two of its citizens, John D. Pierce and Isaac E. Crary, were directly responsible for the provisions in the Constitution of 1835 that established State control of education and the Primary Interest fund (see *Social Institutions*). Pierce was appointed the first Superintendent of Public Instruction. The oak under which the two men are reputed to have talked of their plans in 1834 is on the lawn of the BROOKS HOUSE, 310 N. Kalamazoo Ave., a distinguished example of the stately Greek Revival. The MARSHALL TAVERN (L), corner of S. Eagle and W. Michigan Sts., is one of the oldest buildings in Marshall. The second-story porch and pediment is in the Greek Revival style.

Between 1835 and 1847, Marshall had high hopes of becoming the State capital. A site was set aside as Capitol Hill, an appellation that clung to it for many years. In 1839, the senate did pass a bill designating Marshall as the capital, but the measure was defeated in the house.

Marshall is at a junction with US 27 (see *Tour 12c*).

Right from Marshall on North Kalamazoo St., on a historic trail known locally as the Back Road, to a boulder (L), 1.5 m., marking the SITE of A TOLLGATE. From 1885 to 1893, a group of pioneers who had planked this road collected a toll of 16¢ per vehicle at each of three gates. At last, travelers refused to submit any longer to this form of brigandage and tore up one of the gates, burying it in a field near by. The HALFWAY HOUSE (L), 6.3 m., now deserted and blackened with age, is believed to have been erected in the 1830's. Built of oak timbers, with spacious rooms and a great staircase six feet wide, it served as a stopping place between Marshall and Olivet, in the days when Marshall was a trading post. Potawatomi, bringing their pelts to the trading posts, were frequent visitors.

BATTLE CREEK, 43 m. (885 alt., 43,573 pop.) (see *Battle Creek*).

1. Right from Battle Creek on State 37, known as the Bedford Road, is BEDFORD, 8 m. (250 pop.), a farmers' trading center. The road, now paved, was once an uncertain and rough highway for stagecoaches between Grand Rapids and Battle Creek.

At 16.5 m. is a junction with a side road; L. here 0.5 m. to CAMP KITANNINA, on Clear Lake, a Kellogg Foundation camp and school for handicapped children.

HASTINGS, 27.5 m. (770 alt., 5,227 pop.), on State 37, built on terraces rising from the Thornapple River, was at one time the meeting place of the Grand Rapids and Battle Creek stagecoach lines. The Parker House, State and Church Sts., occupies the SITE OF THE HASTINGS HOUSE, famous for its swinging dance floor, so constructed as to cushion the shock of many dancing feet, and for its enormous bar. From the large balcony above the front door, politicians, heretics, and Chautauqua lecturers gave their messages to the people. Zachary Taylor and General Lewis Cass spoke from its height, when they were stumping for election. On North Jefferson Street, not far from the site of the Hastings House, along a board sidewalk, is REED'S OPERA HOUSE. Packed audiences at Reed's were thrilled as they watched Eliza, in *Uncle Tom's Cabin*, cross the river on papier-mâché ice cakes; and they wept over *The Convict's Daughters*, 'a scenic production of pure thought, action and language, the most powerful melodrama of the

day—in five acts; where love and pathos, hate and passion, clouds and sunshine, smiles and tears, chase each other all through this beautiful story.' Between theatrical performances, Reed's, which was essentially a blacksmith shop and buggy factory, was used as a skating rink or political hall, as the occasion required Northwest of Hastings, State 37 leads to GRAND RAPIDS, 64 m. (655 alt., 168,592 pop.) (see *Grand Rapids*), at a junction with US 16 (see *Tour 4b*), State 21 (see *Tour 6b*), and US 131 (see *Tour 14a*).

2. Left from Battle Creek on Upton Avenue, known as Old US 12, to the AMERICAN LEGION HOSPITAL (R), 4 m., one of the leading institutions in the State for the treatment of tuberculosis. Established by the American Legion in 1923, it is now under State control and open to emergency patients for whom no other immediate hospitalization is available.

Ahead is FORT CUSTER, 6 m., a summer training camp for the Citizens' Military Training Corps and the Officers' Reserve Corps, as well as headquarters and supply depot for the CCC of the Lower Peninsula of Michigan. It was one of the great U. S. Army training cantonments during the first World War. For six weeks during the summer of 1936, Army maneuvers involving nearly 50,000 men were held on these 24 square miles. A part of Fort Custer is the VETERANS HOSPITAL, operated by the Government, for treatment of World War veterans suffering from nervous or mental afflictions.

West of Battle Creek, the route follows part of the old territorial stagecoach road. Coaches on this road were high top-heavy wagons, drawn by four horses. Passengers who could afford them sat on parallel seats cushioned with sheepskin; others were herded onto the top. A boot behind carried trunks and mail and merchandise for the settlers. Stages stopped at every post office and hamlet on the road, changing horses at intervals of 20 or 30 miles at the inns along the way. The trip from Detroit to Kalamazoo took ten days. The inns were large, log structures, usually of one story, though occasionally there was a stuffy attic reached by ladder. Running water was in brooks near by; and whiskey and merchandise were sold at a counter in the main room. In spring and summer, when roads were good, the inns were so crowded that even floors and tables were 'filled with snoring human beings,' and late arrivals found only 'places to lean against.' Rates were exorbitant, but paper money on wilderness banks was plentiful, and no one complained. Many of these roadside inns continued to exist until the advent of motors and modern highways.

At 50 m., the route enters Kalamazoo County, which specializes in celery, peppermint, and mushrooms. The first patent on a combined harvester and thresher was granted in 1834 to Hiram Moore, a mechanic of this county, who, with the aid of John Haskell, a farmer-lawyer, is said to have constructed the machine from details of a dream related by the latter's wife. The harvester cut the cost of reaping from \$3.12 to 82¢ an acre; but technicalities in the patent application left the field open to others, and Moore and Haskell realized little profit from their invention.

GALESBURG, 57 m. (800 alt., 936 pop.), at the intersection of several old Indian trails, was a halting place for travelers on the old St. Joseph-Fort Dearborn road. On a side road, R. from US 12, near the western village limits, the State has preserved the LOG CABIN in which Major General William Rufus Shafter, leader of the Santiago

campaign in the Spanish-American War, was born. At the intersection of Main and Battle Creek Sts. is the \$5,000 SHAFTER MONUMENT. Galesburg contains many old buildings; one of them, the RED GRISTMILL, on an alley just off Battle Creek St., has been in use since 1844.

Right from Galesburg on State 96 is AUGUSTA, 5 m. (800 alt., 711 pop.), home town of Dr. William T. Bovie, nationally known scientist, and Dr. Arthur Millsbaugh, once administrator general of finance for the Persian Government.

Left from Augusta on County 601 (Webster Ave.) to a junction with State 89, 8 m.; L. here to State 184, 9 m.; R. to the KELLOGG BIRD SANCTUARY (*open; gates closed at 7 P M in summer, at 4 P M. in winter; guides furnished*), 11 m., established on Wintergreen Lake in 1927 by W. K. Kellogg of Battle Creek. The sanctuary has been turned over to the Michigan State College of Agriculture and Applied Science, with a trust fund to defray operating expenses. Research, teaching, and demonstrations in wild-life management are now carried on at the sanctuary, which maintains an aviary of native and foreign birds and a waterfowl refuge of 100 acres. During the migration season, the skies are darkened by flocks of waterfowl. Powerful glasses have been placed at strategic points along the shores of Wintergreen Lake, to enable visitors to see the birds more distinctly.

At 59.5 m. is a junction with a lane.

Left on this lane, to ROWE'S ISLAND (*ferry service uncertain*), 0.5 m., in the Kalamazoo River, a 60-acre tract of virgin forest and wild flowers. The island was the scene of Indian tribal ceremonies, and many burial mounds and gardens remain intact. Near the huge diamond-shaped mound in the center of the island (285 feet long and 10 feet high) have been found a copper spearhead and other relics, unrelated to the type used by American Indians, but similar to those of the Maya of Central America.

COMSTOCK, 62 m. (1,200 pop.), is a monument to General Horace Comstock, who came here in 1831, financed the development of the settlement and promised to build a school for the settlers, if they would name the village for him. He became first postmaster and, hoping to bring the county seat from Kalamazoo to Comstock, built a warehouse and landing on the river, a store-house, a store, and a gristmill. His efforts were unsuccessful, and, after serving as State senator for three terms and as township supervisor, he left for New York in disappointment. As a last effort to perpetuate a family name, he had the township called Cooper for his wife, a niece of James Fenimore Cooper.

In 1844, the Arkadelphia Association, disciples of François Fourier (1772-1837), established a co-operative community in Comstock. The 500 members of the association were mostly farmers, though there were also carpenters, shoemakers, tailors, blacksmiths, printers, and one editor. The community was housed in long frame buildings, and the 2,814 acres around them were cultivated, mostly in wheat. Before harvest time, supplies and funds were exhausted, and a few disheartened members left. The following winter brought additional complications, officers were accused of incompetence and mismanagement, and in 1846 the association was dissolved.

KALAMAZOO, 66 m. (775 alt., 54,786 pop.) (*see Kalamazoo*).

Kalamazoo is at a junction with US 131 (*see Tour 14b*).

1. Right from Kalamazoo on Riverview Road is PARCHMENT, 2.5 m. (1,000 pop.), a 'model village' that has grown up around the KALAMAZOO VEGETABLE

PARCHMENT PAPER FACTORIES. Its founder-donor, Jacob Kindleberger, built houses for the workers and provided a park, an athletic field, a church, gymnasium, medical center, a ten-grade school, and the PARCHMENT COMMUNITY BUILDING (R), 317 Riverview Ave., where shows, concerts, and lectures are given for mill employees and their families. The village was begun in 1909, when Kindleberger purchased an old beet-sugar refinery and opened his first paper mill. Visitors are always welcome, both in 'Paper Town' and at the factories.

2. Left (S) from Kalamazoo on Portage Road to MILHAM PARK (L), 4 m., partly timbered and divided by Portage Creek. There are facilities for tennis, softball, croquet, volleyball, horseshoe pitching, and swimming, stoves and tables are conveniently arranged for campers and picnickers. In the western section is the PIONEER CABIN MUSEUM (*open 10-10 daily, May 1-Sept. 30*), in which is a reptilian garden containing more than 300 species (*5¢ and 10¢ adm.*). The cabin, a two-story log structure, was presented to the city in 1929 by the Southeastern Community Club to commemorate the club's 100th anniversary.

Section c. KALAMAZOO to the INDIANA LINE; 81 m. US 12.

US 12, leaving KALAMAZOO, 0 m., as Michigan Avenue, crosses a fruit-raising region with an equable lake-tempered climate. At the end of its westward course the highway strikes Benton Harbor, on the sandy shore of Lake Michigan, then bends south to the westerly limits of the State Line in a sweeping curve toward Chicago. Since the days of the first settlers, the land along this route has been noted for its fertility; the towering sand dunes bordering the highway between Benton Harbor and the Indiana Line are a summer haven for Detroit and Chicago vacationists.

OSHTEMO, 5.5 m. (200 pop.), a trading center for grape and apple growers, is one of the highest points between Detroit and Chicago, and the site of the PINE CREST SANITARIUM for tuberculous patients.

West of Oshtemo, vineyards appear in increasing numbers, crowding closely together. In the country north of the highway is produced an appreciable part of America's supply of peppermint and spearmint oils.

PAW PAW, 16.5 m. (800 alt., 1,684 pop.), seat of Van Buren County, is the center of an important vineyard area. A Grape Festival, known locally as the Mardi Gras, is usually held here during the last week in September. The celebration takes place around MAPLE LAKE (R), created in 1908 when the river waters were dammed for power use. Paw Paw took its name from the picturesque river, named by the Indians for the trees that grew in abundance along its banks.

Tragedy, a mural by Frank Van Ness, is in the lobby of the Van Buren County Courthouse on Paw Paw Street; and Carl Hoerman's murals, lake shore views and scenes of agricultural life in the region, are in the hallway of the Paw Paw School, on Michigan Avenue, a training unit of Western State Teachers' College.

Left from Paw Paw on State 119 is LAWTON, 4 m. (778 alt., 1,164 pop.), where wine is made and grape juice pressed. From a hill at the southern city limits, miles of vineyards spread in a dusky panorama.

LAWRENCE, 25.5 *m.* (700 alt., 570 pop.), was formerly a loading point for flatboats going down river to St. Joseph. Westward the highway crosses a fertile region, producing asparagus, apples, grapes, cherries, tomatoes, cantaloupes, celery, and mint, chiefly.

HARTFORD, 31.5 *m.* (700 alt., 1,484 pop.), is surrounded by orchards and vineyards. All fruits and vegetables grown hereabouts are transported to the great produce market at Benton Harbor. An unusual industry is a foliage factory, in which natural foliage, preserved by a secret process, is used in the manufacture of garlands and wreaths.

Right from Hartford on County 687 to a township road, 15 *m.*; L. here to St. DOMINIC'S INDIAN MISSION, 4 *m.*, a decaying frame structure erected in 1856 by Potawatomi who came here from Cass County when their land was taxed. The church foundation was built of timbers hewn from the forest, and logs were exchanged at a near-by sawmill for the necessary lumber, but the Indians had no money for shingles. Chief Simon Pokagon, who became a writer and lecturer of note, recounts how this difficulty was overcome. 'The band, which numbered about 300, came to me to get a job cutting down ten acres of timber that they might obtain money with which to buy the shingles. We came to terms and they agreed to commence cutting the following day. As they left I told them I would be over the next afternoon to see what kind of a job they were doing. I was late and did not arrive until near sundown. Approaching I was surprised to hear what I thought must be a war-whooping pow wow going on. Trees were falling and the braves were shouting, creating a great confusion of sounds. I could hardly decide whether to go ahead or retreat. At length I advanced and saw trees crashing down the whole width of the ten-acre plot in one great front. Moving on I met some of the men . . . and they informed me that the whole tribe had turned out, and by forming a line along the front and notching the trees, had fallen the timber inward, forcing one tree to knock down the next and the next the one beyond, thereby saving themselves much chopping.' Behind the church is an old POTAWATOMI CEMETERY containing 1,700 graves. About 30 Indians still live in the district.

WATERVLIET (Dutch, flowing water), 36.5 *m.* (700 alt., 1,207 pop.), settled in the early 1830's, was named for the rapids that once existed in the Paw Paw River. HAYS PARK, on North Main St., a municipally owned tract of 17 acres, is a resort, recreational center, and tourist camp. South of the park is the Paw Paw River; on the north side, a steep bluff forms a natural amphitheater. During summer the city is a resort for those attending the yacht races at PAW PAW LAKE, north of the business section on State 140.

COLOMA, 38.5 *m.* (700 alt., 826 pop.), a canning center, attracts many visitors because of the natural beauty of the surrounding country. The old COMMUNITY CHURCH (1855), on Church St., which has long played an active part in the life of Coloma, was a recruiting center for volunteers for the Civil War. The bell was taken from a wrecked steamship.

BENTON HARBOR, 48 *m.* (596 alt., 15,434 pop.) (*see Benton Harbor*).

Benton Harbor is at a junction with US 31 (*see Tour 15c*).

ST. JOSEPH, 50 *m.* (591 alt., 8,349 pop.) (*see St. Joseph*).

GRANDE VISTA GARDENS, 57 m., a tourist camp operated by the House of David, is in two units, one on either side of the highway. Its 66 overnight cabins, 2 gas stations, restaurant, and night club are all in a florid Mediterranean style of architecture.

At 58 m. is a junction with an earth road.

Left on this road is STEVENSVILLE, 0.5 m. (633 alt., 271 pop.), the starting point for hikes through one of the wildest and least explored regions along the Lake Michigan dunes. GRAND MERE PARK, on the lake shore, affords camping facilities. In the TERRANCE GLADIOLI GARDENS as many as a million gladiolus bulbs, of 400 varieties, are raised annually.

The Zoo at the NAVAJO TRADING POST (R), 63 m., is the home of Jerry, a mountain lion, whose mate, Lady, was the animal heroine of the motion picture *Sequoia*. The post is also a camping site.

At 63 m. is a junction with County 330.

Left on this road is BRIDGMAN, 0.5 m. (641 alt., 848 pop.), home of more than a score of nurseries, from which plants are shipped to many parts of the United States and Canada. Many of the sand dunes at Bridgman are heavily wooded and overrun with flowers. In lumbering days a huge dune was tunneled, so that tracks might be laid to a pier on the lake. In the years immediately following the first World War, the dunes, comparatively wild and unfrequented, served as a meeting place for the then illegal Workers' Party, thus achieving a measure of fame in labor history.

The WARREN DUNES (R), 65 m., cover more than a mile of Lake Michigan shoreland. Part of a range that follows the easterly and southerly lines of the lake, these dunes are imperceptibly but continually moving. Every effort made to anchor them has failed. Scrub plants and trees have been strangled and engulfed; and a cottage, half-buried, juts from the sand like a surf-battered hulk.

HARBERT, 70 m. (50 pop.), a favorite resort of Chicagoans, is the home of Carl Sandburg, Illinois poet.

LAKESIDE, 72 m. (300 pop.), scene of more than one exciting shipwreck and rescue, when lumbering was in its heyday, is now important only as a resort.

At 76 m. is a junction with State 60 (see *Tour 3*), near the northern limits of NEW BUFFALO, 77 m. (590 alt., 1,051 pop.), known as the Gateway to Michigan. The village, which was settled in 1835, is the center of a summer-camp district, which includes a Y.W.C.A. CAMP at Forest Beach; CAMP SOKOL, a Bohemian resort on Lake Michigan; and CHICAGO COMMONS, a welfare project.

STATE LINE REST LODGE (L), 78.5 m., opened by the State highway department in May 1935, is an attractive one-story Colonial frame building, with modern lounges and outside tables and benches. Highway information and descriptive literature on Michigan are available. During the first seven months of operation, more than 30,000 visitors and almost 10,000 automobiles were registered; all 48 States and 12 foreign countries were represented.

US 12 crosses the INDIANA LINE, 81 m., 6 miles north of Michigan City, Indiana.

Tour 3

Jackson—Three Rivers—Niles—New Buffalo; 139 *m.* State 60.

Roadbed hard-surfaced except for a 10-mile graveled stretch W. of Homer.
Michigan Central R.R. parallels route.
Accommodations at short intervals.

State 60, a long link in the important trunk line connecting Detroit and Chicago, runs through rolling farm lands in its direct course from Jackson to the southern tip of Lake Michigan. For many miles along the middle stretch, the highway follows the St. Joseph and Portage Rivers—waterways that have made possible the many small industrial settlements along the route. In this territory, once the land of the Potawatomi, Sauk, and Shawnee tribes, are several village museums, in which are exhibited relics of early days, when mission and fort attempted the civilization of the Indian.

JACKSON, 0 *m.* (995 alt., 55,187 pop.) (*see Tour 13a*), is at a junction with US 12 (*see Tour 2a*) and US 127 (*see Tour 13a*).

SPRING ARBOR, 9 *m.* (500 pop.), in the early 1840's was the home of the small Free Will Baptist College, later removed to Hillsdale (*see Tour 1*). The college permitted no saloons within five miles of the city, to 'entice youth into ruinous company and damning habits,' and card playing was forbidden. The female students dressed plainly, 'cutting off silly talk and thought about fashion and wearing apparel.'

HOMER, 23 *m.* (1,063 alt., 1,108 pop.), in the midst of the burr oak plains, is a manufacturing village that specializes in products of wood and grains. Westward for 20 miles the highway borders the wooded banks of the St. Joseph River.

At 33 *m.* is a junction with US 27 (*see Tour 12c*).

BURLINGTON, 38 *m.* (982 alt., 198 pop.), was settled in 1832. Still visible are the RUINS of THE SAUNDERS SAWMILL, erected on the St. Joseph River in 1850.

UNION CITY (L), 43 *m.* (1,000 alt., 1,104 pop.), skirted by the highway, is so named because the Coldwater and St. Joseph Rivers unite at this point. In abolitionist days, the community was a station on the Underground Railroad. Today it is a quiet farming center, manufacturing creamery products and processing dried milk. The light and power system, municipally owned, transmits current from a dam four miles south on the St. Joseph River.

At 48 *m.* is a junction with State 78.

Right on State 78 is ATHENS, 2 *m.* (981 alt., 622 pop.), along the Nottawaseepee River, a tributary of the St. Joseph. Settled in 1831, Athens gained prominence about 1850, when a committee of villagers succeeded in collecting \$3,000 that the Government owed a group of Potawatomi who had refused to go westward with their tribe. The money was used to establish an Indian settlement on the site of what is now Indiantown.

Ahead on State 78 to a junction with a graveled road, 2.6 *m.*; L. (straight ahead) to a second graveled road, 3.3 *m.*; L. here to a third graveled road, 4.7 *m.*; and L. to INDIANTOWN, 5.2 *m.* Here the committee from Athens purchased land and erected six log cabins, a barn, and a schoolhouse. The Potawatomi, peace-loving agriculturists who inhabited the valleys of the Battle Creek and the Kalamazoo Rivers, once counted their numbers by thousands and their acres 'in four figures', yet, at Indiantown, only 60 tribal members remain to till a meager 120 acres. Chief Mandoka, the last of the properly designated chiefs of the Potawatomi, died in 1934 in his seventy-first year. The Indian children attend the public schools of the district, and the adults, to supplement the small income derived from the weaving of baskets, seek employment in Athens.

Outstanding in LEONIDAS, 55 *m.* (200 pop.), a four-corners village, is a schoolhouse built in 1934. Constructed of native field stone, and well equipped, the building is also used as a community hall. The settlement of Leonidas is associated with the story of Marcheeonoqua, an Indian woman whose charm won her two white husbands. The legend of her beauty still persists in this region.

MENDON, 61 *m.* (900 alt., 692 pop.), is on the Nottawaseepee Prairie, a rich flat land practically cleared of timber. On Midway Street, at the south bank of the St. Joseph River, a granite boulder (L) marks the FORD OF THE GRAY ROBE, where Father Hennepin, a companion of La Salle, stopped in 1680 to bring his message of Christianity to the Indians. A fur-trading post was established here in 1831 and bought two years later by a young Frenchman, Patrice Marantette.

On a hill, immediately east of the ford, is WOODLAWN, the original Marantette mansion, built in 1840, and occupied today by descendants of the family. The thousand acres spreading out below the mansion's galleries were once part of the estate. In Woodlawn, Father Edward Sorin, founder of Notre Dame University, celebrated the first Mass in St. Joseph County.

About 300 yards west of the ford, on the south bank, is the unmarked GRAVE OF CHIEF SAWAUQUETTE, a Potawatomi, who sold his tribal reservation for \$10,000, in 1883, and was poisoned by his people, when he attempted to persuade them to leave for the rich hunting grounds promised them in Kansas. He was given a Christian funeral.

THREE RIVERS, 73 *m.* (900 alt., 6,863 pop.), site of a Jesuit Mission in the seventeenth century, is today the home of Chet Shafer, columnist and homespun philosopher. His local characters appear in Detroit and Chicago dailies, and his Guild of Former Pipe Organ Pumpers, which has a world-wide membership of 2,500 and is claimed to be the Nation's only nonessential organization, has further focused attention on Three Rivers. The town is on the trail known as the Flight

of the Shawnee, named to commemorate incidents in the invasion of the Potawatomi lands by the western Indians under Chief Elkhart.

Three Rivers is at a junction with US 131 (*see Tour 14c*), which unites with State 60 for three miles.

Left from Three Rivers on State 7, which follows South Main Street, is CENTERVILLE, 6.5 *m.* (822 alt., 820 pop.), seat of St. Joseph County. The only industrial unit in Centerville is the DR. DENTON SLEEPING GARMENT MILLS, started in 1878 as an underwear concern. With the popularization of the 'open-windows-at-night' health campaign, the founder of the mill designed the familiar one-piece child's sleeping garment that carries his trade name. The village was settled in 1826, along the trail used by Black Hawk and his Sauk warriors. Though fierce in battle, the natives were not insensitive to the hardships of the early settlers. A white family arriving on Christmas Day 1839, with no food and the mother ill, were received with great kindness. The Indians brought venison and wild fowl and attended the family until the mother recovered. The door of Centerville's first jail was left unlocked, because the village gunsmith had fashioned a lock so intricate that even the sheriff could not manipulate it. Years later, after the lock supposedly had been mastered, the log jail burned, and with it the only prisoner, because no one could open the lock in time to rescue him.

A PIONEER MUSEUM (*open 9-5 Mon-Fri, 9-12 Sat.*), in the county courthouse on the public square, includes among its exhibits a cutting bar, from which the McCormick reaper is believed to have been developed.

Eastward, State 7 leads through NOTTAWA, 10.5 *m.* (200 pop.), to a junction with State 78, 12.5 *m.*; R. on State 78 is STURGIS, 21 *m.* (928 alt., 6,950 pop.), at a junction with US 112 (*see Tour 1*).

JONES, 85 *m.* (250 pop.), is a small farming community situated between Bair and Driskel Lakes. A five-inch CANNON cast in 1837, used during the Civil War at Fort Pitt in Pennsylvania and shipped here in 1896 from Fort Monroe, Hampton Roads, Virginia, is on the shore of Driskel Lake, at the northern end of the village.

On the western border of VANDALIA, 91 *m.* (885 alt., 373 pop.), settled in 1845, is BONINE ELK PARK (R), a woodland tract of 60 acres. Here more than a score of American elk browse in the open, except during the most severe weather. They are sold to zoos, parks, and private gardens, and sometimes to Elk lodges for ceremonial purposes.

At 92 *m.* is a junction with County 665.

Left on this road is CALVIN CENTER, 5 *m.* (30 pop.), a Negro community built around the Chain Lakes First Baptist Church, the oldest Negro church (1837) in Michigan. In Calvin Township, 75 per cent of the population are Negroes, descendants of manumitted or escaped slaves, all officeholders are of Negro blood. The township became a haven for runaway slaves when Quakers in Cass County established a station of the Underground Railroad. The friendliness of the Quakers led many slaves to settle in the area rather than continue the journey to Canada, a practice which eventually led to the notorious 'Kentucky Raid.' Learning that their slaves were settling in this district, 13 Kentucky farmers crossed Indiana in 1847 and invaded Michigan in covered wagons, pretending to be salesmen for a new washing-machine firm. The number of men and the strangeness of their actions aroused suspicion, and local agents for the Underground Railroad, accusing the newcomers of slave hunting, warned them to get out of Michigan. The raiders moved across the Indiana Line, ostensibly on their way to Kentucky, but at Bristol, Indiana, they turned back, re-entered Cass County, and began to round up slaves. The outcries of the Negroes at-

tracted a crowd of 300 Quakers, who surrounded the raiders and ordered them to release their victims. The Kentuckians drew their guns and refused. The posse was also armed, and bloodshed was averted only by the Quakers' creed of non-violence. The leaders induced the raiders to release the Negroes and retire, but later the slave owners sought restitution, and damage suits were filed against the Quaker leaders in the Federal District Court in Detroit. The cases dragged on until 1850, when a decision was rendered against the Kentuckians. Greatly embittered, they carried their complaint to Congress and, through persistent lobbying, were instrumental in obtaining passage of the severe Second Fugitive Slave Law.

CASSOPOLIS, 96 *m.* (900 alt., 1,448 pop.), the seat of Cass County, is on the eastern shore of STONE LAKE (*boating, fishing, swimming*). In Cassopolis Park (R), on the east bank of the lake, is a PIONEER LOG CABIN (*open June-Sept.*), a reproduction built entirely of logs and hewn timber native to the region. Within are pioneer relics and antiques. In the surrounding country, fruit and vegetables are raised, as well as such unusual crops as wormwood, peppermint, and ginseng.

Right from Cassopolis on State 62 is DOWAGIAC, 9 *m.* (860 alt., 5,550 pop.), where stoves, furnaces, and artificial fish lures are manufactured. The stove industry, established in the 1850's, is almost as old as the city.

NILES, 111 *m.* (800 alt., 11,326 pop.), is known as the 'Four Flags City'—the only locality in the State to have been under the flags of France, England, Spain, and the United States (*see History*). In the early 1830's, Niles became one of the few stopping places on the stagecoach route between Detroit and Chicago and, therefore, a point of concentration. The city has many industries, among them a large manufactory of dress patterns, a mushroom nursery, a packing house, and a plant that manufactures metal for cars and airplanes. Montgomery Ward, the mail-order magnate, the two Dodge brothers of automobile fame, and the writer, Ring Lardner, were natives of Niles.

Many of the early dwellings are still intact. One CENTURY-OLD HOUSE, moved in 1935 to N. 4th St. and remodeled to serve as an apartment building, had eave troughs made of large hollowed logs; huge bolts were used in place of nails. In the NILES DAILY STAR PUBLICATION BUILDING is a MUSEUM (*open 9-5 weekdays*) containing a large collection of Indian handiwork, old weapons, and sixteenth-century relics.

Niles is at a junction with US 112 (*see Tour 1*) and US 31 (*see Tour 15c*).

Right from Niles on Grant St. to the SITE OF CAREY MISSION (R), 1 *m.*, on the west bank of the St. Joseph River, marked by a boulder at a crossroads. Founded in 1822 by the first Protestant missionary to western Michigan, the Reverend Isaac McCoy, the mission settlement at one time contained 27 buildings, none of which remains, and reached its greatest activity in 1826. In addition to establishing agriculture and fighting the whiskey menace among the Indians, McCoy directed, at that time, the teaching of 70 pupils in academic subjects, household arts, and farming. The mission, however, was frequented more and more by settlers and traders, who made the missionary's struggle for temperance increasingly difficult. When the Indians were given land farther west, McCoy closed the mission (1832) and continued his work with a new colony in Kansas.

At 118 *m.* is a junction with State 174.

Right on State 174, the Red Bud Trail, is BUCHANAN, 1.6 *m.* (732 alt., 3,922 pop.), formerly McCoy's Creek, one of the oldest cities in the county. On a knoll in OAK RIDGE CEMETERY (L), on Front Street, an unusual monument marks the GRAVE OF JOSEPH COVENEY (1805-97), atheist. A native of Ireland, Coveney settled here in 1836. His monument, elaborately carved with weathered atheistic inscriptions, was made in England, because no local stonecutters would work on the lettering.

Ahead on Red Bud Trail (N. Portage St.) to BEAR CAVE (*open during summer; small fee*), 5.8 *m.* (R), the only cave in this part of the State and one of the few tufa formations in the Middle West. The 30-foot cave, hung with stalactites, faces a bayou of the St. Joseph River. A small cascade is fed by underground springs.

GALIEN, 126 *m.* (675 alt., 488 pop.), in what was at one time part of a vast forest known as Galien Woods, is a producing center of peppermint, grains, vegetables, milk products, honey, and sugar beets. The Galien Farm Bureau Co-operative Exchange is one of the largest of its type in the State.

The village of THREE OAKS, 132 *m.* (700 alt., 1,336 pop.), was founded by Henry Chamberlain, who named it for three white oak trees that stood together near the site of the post office. The Warren Featherbone Company manufactures boning, more pliable than whalebone, from the wing-tip feathers of turkeys. The company also makes such articles as lingerie ribbon, garter ribbon, and rickrack braid. The CHAMBERLAIN MEMORIAL MUSEUM (*open 9-5 weekdays*), in the Warren Building on North Elm Street, contains thousands of pioneer and Indian relics, and sponsors an annual Pioneer Day celebration.

In DEWEY CANNON PARK (R), on the highway, is the first gun captured by Admiral George Dewey in the battle of Manila Bay (1898).

Right from the traffic light in Three Oaks on North Elm St. to a junction with a macadam road, 3 *m.*; L. here to WARREN WOODS, 4 *m.*, a 300-acre tract of virgin beech and maple, preserved by the State as a bird and game sanctuary.

At 138 *m.* is a junction with US 12 (*see Tour 2c*), immediately north of NEW BUFFALO, 139 *m.* (590 alt., 1,051 pop.) (*see Tour 2c*).

Tour 4

Detroit—Lansing—Grand Rapids—Grand Haven; 180 m. US 16.

Roadbed hard-surfaced throughout, three and four lanes between Detroit and Lansing, two lanes westward, heavy commercial traffic
Pere Marquette Ry. parallels route between Brighton and Portland, Grand Trunk Ry. between Marne and Grand Haven.
Accommodations at short intervals.

US 16 follows the course of an old Indian trail through a region whose growth and development afford a cross section of Michigan's history. Between Detroit and Lansing, a fertile farming area, are taverns, deserted mills, and modern factories—landmarks of the transition. The French and later the English made their stations at Detroit, to dominate the fur trade, but not to settle. Working westward, the adventurer stopped in any one place only as long as there was a wilderness to conquer, and then he moved on. The trail he used was beaten into a road by the feet and wagons of the first homesteaders, who started to clear the land. Stagecoach transportation began, and taverns were established. Heavy migration was retarded until after 1825, mainly because there was no developed thoroughfare from the eastern settlements to the region now traversed by US 16. With modern transportation and other technological advances came the industrial plant that opened the new frontier of mass production.

Section a. DETROIT to LANSING; 84 m. US 16.

DETROIT 0 m. (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 12 (*see Tour 2a*), US 10 (*see Tour 5a*), US 25 (*see Tour 9b*), and State 53 (*see Tour 10*).

At 16 m. is a junction with Inkster Road.

Right on this road to the FORD REPUBLIC (*apply at office*), 1 m. (L), a training school for delinquent boys between 12 and 17 years of age. As early as 1890, the problems of discharged city-court prisoners aroused the interest of a group of citizens, among whom was Mrs. Agnes d'Arcambal, who planned the school and was instrumental in establishing preventive methods of dealing with juvenile delinquency. From an original purchase in 1907, the school property has been increased to more than 200 acres. Teaching methods are direct. Respect for property rights is instilled by paying wages to the boys and requiring, in return, payment for their upkeep. The community makes its own laws and enforces them, and the youths administer a complete governmental system, including a supreme court to hear appeals. Currency in imitation of legal tender is made of aluminum, and a school bank cares for savings accounts and the issuance of

checks covering purchases at the Republic store. The boys are encouraged to follow special occupational interests, receiving instruction in manual-training and industrial-education departments. Certain hours are spent at farm work, academic training is maintained at required State standards. A staff of 26 cares for an enrollment of between 75 and 100 boys. Since 1927, discharges have not been returned to the care of probation officers, but have been guided by counselors who keep in touch with the boys' homes, or with the farmers with whom they are placed, if home conditions are not acceptable.

The school has received many bequests from interested citizens. One important contribution came from the Emory L. Ford family, for whom the institution is named. Maintenance is further assured by the Boys' Home and d'Arcambal Association, and deficits are made up by the Detroit Community Fund.

The BOTSFORD TAVERN (*open 11-7 daily; meals served on 24 hour reservation; tea without reservation 12-6*), 16 m. (R), was built in 1836 as a residence and opened in 1842 for the accommodation of the stagecoach trade. The white, clapboarded, two-story structure, ell-shaped in plan, is set back from the highway on a spacious lawn. With its prim and simple lines, it retains the air of less harried days. Owned by the Botsford family for more than 60 years, the tavern was among the best known in the State. With changes in transportation, the inn lost its patronage and stood unused until 1924, when Henry Ford purchased it and the surrounding 40 acres. Restoring the building, supplementing the many original furnishings, planning gardens that contain more than 1,000 lilac bushes, and adding a modern kitchen so that the old one might remain undisturbed, Mr. and Mrs. Ford have sought to re-create the place they knew in their youth.

The MICHIGAN CHILDREN'S HOSPITAL (*open 2-3 Sun.*), 18 m. (L), for crippled and convalescent children under 12 years of age, educates physically handicapped children for useful work. The institution was established in 1918 on the present site, in order to supplement its income by farming activity and because of the natural beauty, isolation, and freedom from urban confusion the place afforded. Farming proved unprofitable and was abandoned.

The LA SALLE WINERY (*open 9-5 weekdays*), 18.5 m. (L), established in 1934 for the production of champagne and other wines from Michigan grapes, produces almost half of the wine made in the State. Modern in its operation, the plant has a total capacity of 1,600 cases a day.

FARMINGTON, 19 m. (893 alt., 1,243 pop.), on the River Rouge, was settled by Quakers in 1824. Then the region was a wilderness, and for nearly 20 years it was penetrated only by a cross-country trail, along which occasional stagecoaches or lone horsemen hurried to reach scheduled taverns by nightfall. Although named for the first settlers' hometown in New York, the village for many years was referred to as Quakertown. Only a QUAKER CEMETERY, on Gill Road, is left from settlement days; but in 1924 a log cabin was built in TOWN HALL PARK (R), as a reminder of local history. The cabin is used as Boy Scout headquarters. Improved transportation has made Farmington a residential suburb, and only two manufacturing concerns remain.

The GILDEMEISTER FLOUR MILL, one block (L) from the traffic light, was built a generation ago by the Gildemeister family, who still operate it unchanged.

The GOVERNOR WARNER HOUSE, 35805 Grand River Ave., erected in 1866, when the Classical Revival had lost favor, shows the Victorian influence. It is of brick painted white, with verandas on three sides, and is surmounted with a cupola. FAIRVIEW SCHOOL, the 'little red schoolhouse,' on a hill west of the city (R), was built when the Grand River Road was constructed, about 1850. Local sentiment led to the remodeling of the building, rather than to the erection of a modern one, when it was discovered that the oak and cherry timbers could be saved.

NOVI, 25 m. (200 pop.), according to popular account, was so named because a sign at the sixth tollgate on the Grand River Road bore the inscription, 'NO VI.' Travelers, reading the legend incorrectly, called the settlement Novi, and common usage eventually influenced the inhabitants to adopt the name officially. However, Oakland County records tell another story. They show that the village was platted and named in 1830 by the board of supervisors, and that the tollgate was not put into use until 22 years later. This account relates that the name was suggested by the wife of one of the supervisors, a village doctor, the Latin term possibly expressing her opinion that the community was once known, but forgotten, or, possibly, 'to be known.'

1. Right from Novi on County 413, Novi Road, is WALLED LAKE, 4 m (600 pop.), on the north shore of a lake of that name. The lake, which occupies a kettle hole, was formerly bordered by a huge wall of boulders, piled along the shore by the pressure of expanding ice. Cottages that line five miles of shore are being remodeled for year-round residence. In the period between the Civil War and the first World War, the lake was the scene of horse racing on the ice, fox hunting, and other winter sports. Meets were held weekly when the ice was good, attracting entries 'for thirty miles around.' There was no racing association, no judges or regulations, and very little betting. Owners raced their horses for the love of the sport, often attracting galleries of 500 or more. Today, motorists often drive on the ice for the excitement of spinning and skidding their cars. Near the shore on South Lake Drive is DODGE BROTHERS PARK No. 2, which affords camping sites and recreational equipment (*open only during summer*). One of Oakland County's most popular resorts, WALLED LAKE AMUSEMENT PARK, is on the east shore. Sponsors of the enterprise annually stage hydroplane and sailboat races, surfboarding contests, and other exhibitions on the lake, with night events presented under colored flood lights.

2. Left from Novi on County 413 is NORTHVILLE, 4 m. (980 alt., 2,566 pop.), whose several small industries have not destroyed the rural appearance contributed by numerous old homes and public buildings set along quiet, shaded streets. The peacefulness of the village, with its several churches, contrasts sharply with the hatred that greeted the introduction of Methodism more than a century ago. The present (1940) METHODIST EPISCOPAL CHURCH, 109 W. Dunlap St., was built in 1885, but, before its organization in 1834, the congregation experienced nine years of enmity and persecution. Camp meetings were frequently disturbed, and in 1832 a visiting preacher was burned in effigy. The worst flare-up came when the young churchmen accepted a log building on the Benton farm as a meetinghouse. Arriving for Sunday morning service, they

found that their enemies had called the night before and razed the building, leaving only the roof, which rested upon the ground. Straddling the ridgepole was the carcass of Benton's bull with a hymnbook in its mouth.

Right from Northville on West Main to Rogers St., Left on Rogers St. to Fishery Road; Right to the WILLIAM H. MAYBURY SANATORIUM (R), 6 m., one of the finest institutions for tuberculous patients in the State. Ideally situated in 1,000 acres of woodland, both of the three-story brick buildings of the institution are so designed that each patient's room opens upon a porch exposed to sunlight. Not one of the thousands of panes of window glass used was new. To save something of the glass-jobbers' estimated cost—\$25,000 to \$30,000—experiments with discarded X-Ray plates were undertaken at Herman Kiefer Hospital in Detroit. A few were cleaned and tested and found to be even better than ordinary glass, since they allowed the sun's actinic rays to pass. Enough plates were purchased from hospitals in the area to fill the entire order. A further saving was made by buying plumbing fixtures, doors, and frames from the famed Pontchartrain Hotel, in Detroit, dismantled during the construction of the sanatorium, 1920-22. The most notable economy was made possible by William H. Maybury, who contributed his time as construction superintendent; the \$50,000 thus saved financed the children's unit. During later life, Maybury devoted most of his time to the institution, and it is in his honor that the sanatorium is now named.

The intersection with South Hill Road, 31 m., is the SITE OF BOGUS CORNERS, headquarters in the 1830's for three counterfeiters who, led by a local blacksmith, used a widely practiced trick for putting their product into circulation. With a box filled with coins, they would approach a prosperous farmer and explain that they had to go East hurriedly, but that the silver dollars were too heavy to carry as baggage on the stagecoach. Would the farmer lend them a fraction of the amount in bills, accepting the silver as security? Should they not return within a week or ten days, the farmer might open the box and spend the money. A number of people were thus victimized, before the blacksmith was imprisoned and the counterfeiters driven away.

NEW HUDSON, 32 m. (300 pop.), serves the adjacent farming community and operates a coach and trailer works that employs 140 men. In early days, the village was the scene of intense political rivalry. The vote in presidential campaigns was determined by contests in which each side erected a single shaft of timber; the tallest won the votes. The Democrats chose hickory and the Republicans tamarack. In 1876, the Democrats, certain that 108 feet of hickory would win, were hooted by their opponents, who pointed to a lead of 10 feet. Suspicious, the hickory crowd inspected their rival's 'vote' more closely and found the pole spliced 30 feet from the top. The custom, popular throughout the countryside, died out when the tall timber disappeared.

The NEW HUDSON HOTEL, near the corner of US 16 and 14-Mile Road, is a spacious frame building, with 18-inch timbers morticed and tenoned. It has been changed little since its construction in 1831. A ballroom, popular for its spring floor that sagged and swayed to the steps of the dancers, was torn down only a few years ago. During the Civil War the Hotel served as a recruiting station.

Right from New Hudson on County 421, Milford Road, is MILFORD, 6 m. (945 alt., 1,364 pop.), named for the numerous mills of its early days, now

replaced by a food-products company and a new Ford unit that manufactures small automobile parts. The village is in a hilly country on the banks of Pettibone Creek and the Huron River, both sources of power. The COE HOUSE, on Summit Street, is part of a tavern erected in 1830. The two-story frame structure is long and low, its style reflecting the simplicity of the Greek Revival. The first keepers of the tavern brought several locust trees from New York, and the one growing in the inn-yard is considered the progenitor of the many locusts in the region.

Left from Milford on County 437 to the GENERAL MOTORS PROVING GROUND, 11 *m.* Visitors are taken in busses over the route where new car models, not restricted to General Motors products, are tested. Cars are driven at terrific speed over every type of pavement, over rough, stony courses, through water and sand, and over steep hills. A garage is equipped with modern testing devices; a large auditorium and dining room are kept in readiness for meetings of salesmen, engineers, and dealers.

KENSINGTON, 36 *m.*, probably the most notorious of Michigan's many ghost villages, began life peaceably enough. The original beauty of the place, and its position on Kent Lake and the Grand River Trail, made it a favorite Indian camping ground. Because it marked the terminal of canoe navigation on the Huron, the early traders made the village their headquarters while bargaining with natives of the valley. American pioneers began settlement in 1832. The colony chose the old English name, Kensington, but it was familiarly known as Kent. With the establishment of a road over the trail, Kensington experienced a boom. The unsettled state of the frontier, however, soon fostered lawlessness and speculation; among other misfortunes the notorious Kensington Bank scandal broke in 1838. Under the old Freeholders' Law, which ushered in an era of wildcat banking throughout the State, this bank was founded by a group of village speculators who succeeded, by manipulation of stock, in drawing several local moneyed men into the scheme. With a borrowed \$50,000 certificate of deposit as sole capital, the bank opened for business. A supply of currency, duly signed by officials, was issued but was slow to circulate. Ostensibly to speed up the process, Alfred Dwight, an organizer of the bank, and Samuel Dix carried \$50,000 in newly issued notes to Milwaukee, where they quickly exchanged the money for jewelry, city lots, and livestock. In Kensington, the moneyed men were left holding the bag. The absconders were caught and returned, but there is no record of their prosecution. Although most of the stolen money was recovered, the bank soon closed. Kingsley S. Bingham, then speaker of the State house of representatives and later governor of Michigan and United States senator, was appointed receiver.

During this period, thievery and misuse of shipments from outside wholesalers was so prevalent that all dealers boycotted the village; it became a byword that goods failing to reach the buyer had 'probably gone to Kent.' With the collapse of the bank and the enforcement of the Wholesalers' Act, Kensington residents moved away, and the last village store closed before the Civil War. Today only two or three farmhouses, a cemetery, and roadside filling stations mark the site.

At 38.5 *m.* is a junction with US 23 (*see Tour 11b*).

BRIGHTON, 40 *m.* (927 alt., 1,287 pop.), in a rolling upland country, is the center of a summer-resort region. The first settler came in 1832, and in time a community developed around a gristmill, the ruins of which still stand in a ravine one block left of the traffic light. From the porch of the finely designed GREEK TEMPLE HOUSE (L), 314 Grand River Ave., built in 1840 by Daniel S. Lee, Lewis Cass made an address during his campaign for the presidency in 1848.

HOWELL, 50 *m.* (918 alt., 3,615 pop.), on Thompson Lake, has several small factories. In the 1860's its fortunes were derived from lumbering, chiefly by the McPherson brothers. With the disappearance of the timber, the lumbermen turned to dairying, and Howell became one of the largest Holstein cattle centers in the country. It has a weekly newspaper, a Carnegie library, and many social clubs. Early in its history, Howell was plagued by the temperance issue. In 1855, the sale of liquor caused such feeling that 30 of the community's conscientious women descended upon Samuel Balcom's saloon and demolished it. Taking the case to court, Balcom secured a judgment of \$540, but collected only a part. During the 1850's and early 1860's also, the Know-Nothing movement was important in local affairs. 'One hundred per cent American' in character, the party was started in Germantown, Pennsylvania, to urge changes in the immigration laws, but it very soon degenerated. In the Midwest it became an anti-Catholic, anti-foreigner clan. Closed meetings were held on the second floor of a Howell business building, and members paraded into the front door, marched upstairs, then stole down the back way and re-entered, to impress onlookers with their great numbers. When it became apparent that the membership they claimed—some 300—had been greatly exaggerated, the terror they had inspired, in attempts to discourage opposition and control elections, died out completely. The city has had four large fires—in 1857, 1860, 1874, and 1887. The latter entirely destroyed the business section and some of the oldest residences.

Among other collections made by Mrs. Ralph M. Tubbs, 320 E. Lake St., is a COLLECTION OF BOTTLES (*open only in summer; visitors guided in groups*), numbering about 1,000, some of them more than 100 years old. Bottles of unusual design, often crudely blown, were fashioned to commemorate notable events. Of particular local interest is one of the Pingree Potato Bottles, which were passed out by bartenders as Christmas gifts, during the time when Hazen Pingree, as mayor of Detroit, was winning national attention with his city-lot potato patches for feeding depression sufferers of 1894. These potato-shaped bottles are now rare. Other bottles illustrate the scaling of Pikes Peak and the assassination of President Lincoln.

Left from Howell on State 155 to the MICHIGAN STATE SANATORIUM, 3 *m.*, established for the treatment of pulmonary tuberculosis. County charges are admitted, the State reimbursing the county in the amount of 75¢ a day for each person; patients financially able to pay are charged \$3 a day. Appropriations by the legislature meet the deficit.

FOWLERVILLE, 59 *m.* (893 alt., 1,141 pop.), as with many communities in this part of the State, was established during the 1835 wave of immigration from the East. Numerous old trees, planted by the pioneers, contribute to the gracious, long-settled appearance of these southern Michigan communities.

The *American Odd Fellow*, a monthly magazine, is published in WILLIAMSTON, 70 *m.* (833 alt., 1,458 pop.), on the Red Cedar River. Left of the highway, near the village, are large clay pits, commercially operated, which contain strata of soft coal. When removal of the clay uncovers a layer of coal, it is mined by a steam-shovel in a manner similar to the strip mining of Illinois. When the stratum of coal has been removed, clay-digging operations are resumed. Farmers in the districts excavate pits on their land and often do a small retail business in coal, in addition to supplying their own needs.

EAST LANSING, 81 *m.* (840 alt., 4,389 pop.) (*see Lansing*).

LANSING, 84 *m.* (843 alt., 78,397 pop.) (*see Lansing*).

Lansing is at a junction with US 27 (*see Tour 12b*) and US 127 (*see Tour 13a*).

Section b. LANSING to GRAND HAVEN; 96 m. US 16.

In several counties west of LANSING, 0 *m.*, mint has replaced bulrushes and swamp grass on thousands of acres of lowland. In Clinton County alone, peppermint and spearmint plants produce on 7,300 acres a yearly crop valued at \$240,000. Peppermint is the most important, its uses being more varied. The yield of oil is from 25 to 50 pounds to the acre. It has proved a wonder industry, utilizing lands considered worthless and furnishing a crop easily stored and, therefore, easily stabilized. The market has a fairly low absorption point, and there is always danger of overcrowding the attractive business. The State produces more than half the country's supply of peppermint oil; the area centering in St. Johns (*see Tour 12b*) accounts for 40 per cent. When the plants are in full bloom, usually during August, the leaves are cut and distilled by a simple forced-steam process. Often the oil needs no further refining than the farmer's distillation.

In the section between Grand Rapids and the western end of the route, the pioneers came, not for land, but to cut the forests. When the lumbermen had felled all the timber in the district, other settlers came to till the soil. Today this section produces abundant crops of fruit and grain, and the villages and resorts, largely settled by the Dutch, are neat and prosperous.

At 11 *m.* is a junction with State 100.

Left on State 100 is GRAND LEDGE, 3 *m.* (849 alt., 3,572 pop.), on the Grand River, named for the sandstone ledges, 25 to 35 feet thick, that overhang the river for nearly a mile. Good bituminous coal deposits underlie the rocks and, although never worked commercially, they have been extensively mined by local workmen. The sandstone is used in the tile and clay-products factories of the city, which occasionally employ one-third of the population.

At the western edge of the city is **GRAND LEDGE PARK**, through which the river cuts a deep ravine across 28 acres of hardwood. A ten-acre **SEVENTH-DAY ADVENTIST CAMPGROUND**, at the eastern city limits, is a village in itself, with streets, stores, a post office, and electric lights, for the use of the 500 families that meet here each August for conference.

EAGLE, 14 *m.* (839 alt., 123 pop.), is on the banks of the Looking Glass River, a naturally beautiful stream disfigured by slime and water growths. A Federal Drainage Project was once proposed to clean out and deepen the river, but Michigan sportsmen's organizations, claiming that wild-life breeding grounds would be destroyed, exerted sufficient pressure to stop the project. Fifteen hundred farmers of Clinton and Shiawassee Counties, controlling 200,000 acres of good hunting lands, retaliated by invoking the Horton Trespass Law to keep all hunters and trappers off their property. The deadlock is still unbroken.

Right from Eagle on County 549 is **WESTPHALIA**, 9 *m.* (805 alt., 328 pop.), settled in 1836 by natives of Westphalia, Germany. A priest and five companions explored the wilderness on foot and, choosing this site, established Michigan's first parish for German-speaking Roman Catholics. A log church was constructed immediately, but soon became too small for the growing community. It was replaced successively by two larger frame edifices and, in 1869, by the present **ST. MARY'S CHURCH**, a substantial structure with attractive belfry and spire. Many old buildings in Westphalia, dating from the 1870's, are but little changed from their original appearance.

PORTLAND, 22 *m.* (717 alt., 1,902 pop.), is the largest of three communities between Lansing and Grand Rapids. A sudden curved dip of the road makes a surprising sweep into the village, previously obstructed from view by a high bluff. At the confluence of the Looking Glass and Grand Rivers, Portland is a small industrial center and farm-produce shipping point. A flour mill is the largest of several enterprises that use local water power. Clarence Budington Kelland, the popular author, was born here July 11, 1881.

At 34 *m.* is a junction with County 579.

Left on this road is **LAKE ODESSA**, 75 *m.* (868 alt., 1,220 pop.), on the shores of two large connecting lakes, Jordan and Tupper. The village was founded in 1887 and named for the Russian city. The Lake Odessa Bible Conference, interdenominational, is held during the last week of June and the first week of July. Free tourist camps, municipal and private bathing beaches, good fishing, and groves for picnicking make Lake Odessa popular with campers and resorters. There are courts and grounds for games, a race track, and a two-mile straightaway for speedboating.

The unbroken stretch between the junction and Cascade, through a well-developed agricultural belt, becomes increasingly interesting as more clearly defined hills and valleys appear.

CASCADE, 53 *m.* (76 pop.), on the Thornapple River, is a residential suburb of Grand Rapids. Early in its history, mineral springs, with properties that reputedly would cure St. Vitus's dance, were discovered in the vicinity. A three-story hotel was erected over the springs, and patients from many sections of the State came for treatment. After

a short period of operation, the springs undermined the building, and it collapsed. There were no fatalities, but the disappointed promoters never attempted to rebuild the hotel.

At 59.5 *m.* is a junction with Robinson Road.

Left on this road to a junction with Reeds Lake Boulevard, 0.1 *m.*; L. to HODENPYLE WOODS and REMINGTON PARK, on the northeastern shore of REEDS LAKE, 0.5 *m.* The lake is about one-and-a-half miles long, with an average width of one-third of a mile. Fronting the southern shore are imposing homes on high bluffs. Around the eastern arm and on the northern shore, as far as Hodenpyle, the water's edge is dotted with cottages. The shores slope down to flat, sandy beaches.

Hodenpyle Woods is a 40-acre tract of virgin forest on the north shore of Reeds Lake, donated to the city of Grand Rapids in 1912 by Anton G. Hodenpyle, who stipulated that the land should be forever held in its natural state, unimproved except for the planting of additional trees, shrubs, and flowers indigenous to the locality. The only artificial elements in this bit of original Michigan hardwood forest are a network of canals and a winding graveled road.

GRAND RAPIDS, 63 *m.* (655 alt., 168,592 pop.) (*see Grand Rapids*).

Grand Rapids is at a junction with US 131 (*see Tour 14a*) and State 21 (*see Tour 6b*).

1. South from Grand Rapids on State 37 is HASTINGS, 36.5 *m.* (770 alt., 5,227 pop.) (*see Tour 2b*), and BATTLE CREEK, 64 *m.* (885 alt., 43,573 pop.) (*see Battle Creek*), at a junction with US 12 (*see Tour 2b*).

2. North from Grand Rapids on County 484, the River Road, to DWIGHT LYDELL HATCHERY (*open*), 6 *m.*, where millions of fish are hatched annually. Brook trout, rainbow trout, perch, walleyed pike, small mouth bass, large mouth bass, and blue gills are the principal species raised. The hatchery, now owned and operated by the State, was established by the late Dwight Lydell, well-known fish culturist. Experimental production of daphnia, or water flea, favorite food of the tiny fry fish, is carried on in six concrete ponds.

MARNE, 72 *m.* (400 pop.), formerly known as Berlin, was renamed during the first World War. It enjoyed a lumber boom in 1840 and, upon the decline of that industry, turned to agriculture.

Ottawa County was named for a tribe of sober, handsome Indians who constructed some houses of logs, generously proportioned, near the shores of Lake Michigan, in this county. However, wigwams served as homes for most of the Ottawa, winter and summer. Their moral code was simply to be honest, strong, and, unless provoked from without, peaceful. But for the helpfulness of this tribe, the settlement of this section of the State would have been infinitely more difficult for the white man, and many pioneers have acknowledged their debt in this respect.

At 75 *m.* is a junction with a township road.

Left on this road to a junction with County 462, 3 *m.*; R. here to LAMONT, 3.5 *m.* (225 pop.), on a bluff above the Grand River, founded in 1835, before Michigan became a State. The village took the name of a generous citizen of the county who had provided local authorities with a much-needed road scraper. Lamont was originally laid out and platted as a city, but the prejudice of its inhabitants kept rail lines out of the place, and the expected development did

not materialize. The villagers' hatred of railroads was engendered by an incident in New York State, home of the pioneers. Just as the group was ready to start West, a prize calf that was to help finance the trip was killed by a train. The pioneers were unforgiving; when railroads approached Lamont, the inhabitants insisted the lines be routed around their settlement.

Another pioneer settlement was at COOPERSVILLE, 80 *m.* (644 alt., 1,004 pop.), now largely a Dutch community, with several industrial plants, including a canning factory, a flour mill, and a creamery. The attractive business center is not visible from the highway, which keeps to the southern edge of the village.

At 81 *m.* is a junction with the Eastmanville Road.

. Left on this road to EASTMANVILLE, 3 *m.* (150 pop.), a small colony of summer homes on the north bank of the Grand River. A DRAWBRIDGE is kept in operation, although the river at normal stages is so shallow that nothing larger than a scow or rowboat can navigate the stream. Because the Grand River is deemed by the Government to be navigable from its mouth to Lamont, 19 miles above, the bridge tender daily keeps his watch, and nightly, on the central span, he hangs the red and green navigation lights that mark the channel for whatever craft may pass. But no vessel ever appears. In more than a decade the bridge has been opened but twice. the river was at flood stage, and a small tug and a few barges drawing less than four feet passed upstream and returned.

SPRING LAKE, 94 *m.* (594 alt., 1,271 pop.), on the heavily wooded shores of a lake of that name, has had a varied existence, changing from milling center to shipping point for fruit and from famed spa to quiet resort. The mineral springs, whose curative properties drew thousands of visitors every season between 1870 and 1900, have been tapped again, and new wells put down; the waters are to be sold in commercial quantities. After a bit of steel has been immersed in this spring water, it will immediately be magnetized sufficiently to pick up small pieces of metal. The Grand River ends here, flowing into Spring Lake, which in turn enters Lake Michigan, thus providing a channel and harbor facilities. Spring Lake is not merely a summer resort; several small industries have given it stability, reflected in substantially built houses and public buildings. Swimming and fishing are excellent.

At 95 *m.* is a junction with US 31 (*see Tour 15c*) on the northern border of GRAND HAVEN, 96 *m.* (590 alt., 8,345 pop.) (*see Tour 15c*).

Tour 5

Detroit—Pontiac—Flint—Saginaw—Clare—Reed City—Ludington;
238 m. US 10.

Roadbed hard-surfaced or well graveled throughout; eight lanes between Detroit and Pontiac, four lanes between Pontiac and Saginaw, two lanes westward. Grand Trunk Ry. and Pere Marquette Ry. parallel the route. Usual accommodations throughout.

Proceeding in a northwesterly direction between Detroit and Saginaw, US 10 passes through four important automobile centers. As far as Pontiac the highway, here a through-traffic artery with two separate roadways, is known as Woodward Superhighway, the history of which includes every phase of road building in Michigan. Originally the Saginaw Trail, it became in 1836 a Federal military road with a 90-foot right of way; later it was a State road, with its right of way cut in half. Under the plank-road act of 1848, the highway was improved by private capital and made a toll road, but the venture proved unprofitable and was abandoned. Gravel-surfaced in the 1890's, this same road was used for annual bicycle races between Detroit and Pontiac. In 1909, when automobiles came into practical use, it became one of the first concrete roads in the world. Eventually the narrow highway became obsolete, and, in 1923, the Woodward Superhighway, designed by Colonel Sidney D. Waldron, was begun. This highway, with its 200-foot right of way and eight lanes, four on either side of a tree-lined parkway, is the finest in Michigan.

Section a. DETROIT to SAGINAW; 94 m. US 10.

DETROIT, 0 m. (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 12 (*see Tour 2a*), US 16 (*see Tour 4a*), US 25 (*see Tour 9b*), and State 53 (*see Tour 10*).

US 10 leaves Detroit on Woodward Avenue, which was laid out by Judge Augustus B. Woodward in 1805, as part of his plan for a system of streets radiating from a common center. Judge Woodward's original plan called for a street 120 feet in width, but in 1818, during his absence from the city, board members agreed to reduce the width north of Grand Circus Park to 66 feet. Despite the judge's subsequent protests, the board's decision was adopted, when real-estate owners and others along the right of way expressed a preference for the narrower street. When the automobile supplanted other means of trans-

portation, the thoroughfare became the most heavily traveled street in Detroit; south of Grand Boulevard the congestion became so great during rush hours that the avenue could only accommodate half the vehicles that tried to use it. To remedy this intolerable situation, it was decided to revert to Judge Woodward's original plan and to increase the width of the avenue to 120 feet. In 1937, after lengthy condemnation proceedings and the demolition of a dual grade separation for the New York Central and Grand Trunk Railroads, the avenue was completed, at a total cost for the 2.56 miles of \$11,127,885.

BASE LINE SUPERHIGHWAY, 9 *m.* (erroneously called Eight Mile Road), an east and west highway, marks the northern limits of Detroit. It is the base line upon which original surveys of the State were made, and from which land descriptions are given.

FERNDALE, 10 *m.* (634 alt., 20,855 pop.), incorporated as a village on April 1, 1918, is a suburban settlement with restrictions against non-English-speaking races. Almost 50 per cent of the residents own their own homes. Increasing its population nearly 1,000 per cent in ten years, Ferndale outgrew its village form of government and has been incorporated as a city under the commission-manager plan since 1927.

PLEASANT RIDGE, 10.5 *m.* (650 alt., 2,885 pop.), a station on the Grand Trunk Railway, is a suburban residential community, incorporated as a village in 1919 and as a city in 1938.

At 11 *m.* is a junction with Ten Mile Road.

Left here to the DETROIT ZOOLOGICAL PARK (*open May-Nov., 10-5 weekdays, 9-6 Sun. and holidays; picnic grounds and parking lot*), 0.2 *m.*, on a 125-acre tract given to Detroit by the Detroit Zoological Society and the late Horace Rackham. The Detroit Zoo follows the plan of Carl Hagenbeck's zoological park at Stellingen, Germany; animals are confined by moats, and the backgrounds suggest their native habitat. Animals of different species that are known to live in peace together are grouped in the same inclosure. A glass-domed aviary near the entrance houses more than 500 birds; at the opposite end of the park are the larger animals. Midway on the northern side are the JOE MENDI THEATER (*children 5¢, adults 10¢*), in which five chimpanzees give daily performances, the Siberian tiger's cage, the lions' den, and the elephant inclosure. The bear exhibit is near the western terminus of the MINATURE RAILROAD (*fare 5¢*). Feeding time is from 3:45 to 4.45 on weekdays and an hour later on Sunday. When city children showed more interest in a team of work horses than in the monkey exhibit, Director John F. Millen installed a model American farmyard for exhibition purposes. If contemplated improvements are completed, the park will be the largest in the world devoted exclusively to zoological exhibits.

At 11.1 *m.* is a junction with South Washington Avenue.

Right on this street to the business section of ROYAL OAK, 0.5 *m.* (693 alt., 22,904 pop.), so essentially residential that it has but one small hotel. Residents, unlike those of Detroit and Pontiac, show no desire to attract large manufacturing enterprises to their city. The manner in which Royal Oak received its unusual name has become a subject of controversy in Oakland County. The most commonly accepted account is that Governor Lewis Cass, exploring the country north of Detroit, camped at the end of his first day's journey under an oak tree more than 100 feet tall. On arising next morning, Cass exclaimed, 'This is indeed a royal oak!' and went on to remark that it reminded him of the 'Royal

Oak' in Scotland in which Prince Charles, the Pretender, once hid from his enemies.

A tavern known as Mother Handsome's Place was erected near the Royal Oak by a woman who had served as an army laundress in the War of 1812. In 1821, S. V. R. Trowbridge, a pioneer in search of land, made a trip from Detroit to the tavern and later described the country as it then appeared: 'A turnpike had been made for five miles,' he wrote, 'and then the horrible road through the swamps and marshes . . . After passing some distance it became terrible; my wife walking, leading one [child] and carrying a great boy of thirty pounds; oxen wild and ungovernable; spirits sunk; almost sorry I ever brought my family to suffer and die in these wild woods'.

However, in the following year the first land was cleared near the oak, and in 1830 Royal Oak's first industrial plant began the manufacture of harvest cradles. Cow bells and sheep bells, which found a market in many parts of the United States and Canada, were later manufactured in the young village, and for a time fishing boats were built for the Great Lakes trade. These industries vanished with the advent of the machine age and have not been replaced by others. In 1929, slightly more than 90 per cent of the inhabitants owned their homes. Adverse conditions in later years reduced the percentage, but the proportion of home owners remains high. In 1921, Royal Oak was granted a city charter and adopted the commission-manager form of government.

HUNTINGTON WOODS, 11.5 *m.* (650 alt., 835 pop.), bounded by Ten and Eleven Mile Roads between Woodward Avenue and Coolidge Road, is a restricted residential community lying to the left of US 10. There are no stores in the city, and all industry is prohibited. Founded on six subdivisions platted after the first World War, Huntington Woods was incorporated as a village in 1927, and in 1932 was granted a city charter with a commission-manager form of government. Water is purchased by meter from near-by Royal Oak, which in turn obtains its supply from the City of Detroit.

At 13 *m.* is a junction with Catalpa Drive.

Left on this road to a junction with Coolidge Highway, 1 *m.*; R. on Coolidge Highway is the business section of **BERKLEY**, 1.3 *m.* (685 alt., 5,571 pop.), one of the seven independently governed civic units that compose the suburban area of Greater Detroit. Berkley, incorporated as a village in 1925 and granted a city charter in 1932, includes four-and-one-half square miles of area within its limits. The village site and adjoining lands were under cultivation until 1913, when a subdivision was platted by Detroit real-estate operators. Unrestrained development resulted in more than 30 subdivisions within the limits of the city, containing 54 miles of streets and 45 miles of water mains. The real-estate boom collapsed, and in many places now weeds and bushes overgrow streets and fire hydrants; vacant lots outnumber improved plots four to one.

Near the intersection of Twelve Mile Road and Woodward Avenue, 13.5 *m.* (R), is the **SHRINE OF THE LITTLE FLOWER** (*open 8-4:55 Mon.-Fri., 9-6 Sat. and Sun.*), designed by Henry McGill of New York and dedicated to Saint Thérèse of Lisieux.

The Shrine has become the most widely known church in the Detroit area, through the radio activities of the pastor, Father Charles E. Coughlin (*see Social Institutions*). A distinctive feature of the church is the bold 100-foot **CRUCIFIXION TOWER**, constructed in 1931 of granite and marble, square in form and girded by four enormous crosses. The Woodward Avenue side bears a figure of Christ of heroic

size; below are carved His last words. Two other Biblical figures adorn each corner of the Woodward Avenue base and, in the space between them and about the top of the tower, other sculpture carries out the Biblical and decorative theme. The church building proper, completed in 1933, is cruciform in shape, with an octagonal center surmounted by an octagonal copper-roofed lantern. The walls are of Ohio sandstone interspersed with blocks of stone from the Nation's States and territories; on each block is cut the name of the State or territory and its official flower.

The somewhat complex auditorium of the church, which will seat 2,500 persons, is unusual in having the principal altar—of Italian marble—in the center of the auditorium and the pulpit at one side in one of the galleries. The pews are arranged around the central area and in the transepts and galleries, giving all worshippers a view of the altar.

BIRMINGHAM, 17.5 *m.* (784 alt., 9,539 pop.), named for the English manufacturing city, was hacked out of the wilderness by John and Rufus Hunter. The Hunter brothers crossed the Detroit River on the ice in the winter of 1817, stopped in Detroit long enough to obtain provisions, and pressed on through the wilderness until they reached a rich game country traversed by a small clear stream. Their cabin was the first in the section; others soon followed. In 1839, Birmingham was a regular stagecoach stop on the Saginaw Trail, and, in 1864, it was incorporated as a village; in 1933, it became a city. In the northern and northwestern sections are many attractive homes with landscaped grounds and fine old trees.

At 19 *m.* is the junction with Lone Pine Road, which leads left 1.5 miles to the CRANBROOK FOUNDATION (*see Tour 5A*).

BLOOMFIELD HILLS, 20.5 *m.* (834 alt., 1,127 pop.), is a restricted residential community. The business section is limited to the small valley at the intersection of Woodward Avenue and Long Lake Road. In the surrounding countryside are the estates of many wealthy Detroiters. No residence may be built within the corporate limits on a site of less than half an acre.

The history of Bloomfield Hills began in 1819, when Amasa Bagley followed an Indian trail into this section and cleared land for a farm home on the site of the city's present business district. Other settlers followed, establishing a village known as Bagley's Corners. When Bagley moved to Pontiac in 1830, the village assumed the name of Bloomfield Center and, for more than 70 years, was a farming community. In the early 1890's, city dwellers, seeking privacy and quiet, began to purchase estates in the district. The name was changed to Bloomfield Hills, and in 1927 it was incorporated as a village; five years later it became a city.

At 20.7 *m.* is a junction with Opdyke Road.

Right on this road to the CHURCH OF ST. HUGO OF THE HILLS (L), 0.5 *m.*, built by Mr. and Mrs. Theodore F. McManus in memory of their two sons.

whose remains are interred in the crypt. Designed by Arthur Des Rosiers and dedicated in 1936, the church combines an Early English exterior with an austere interior having some Norman features. It has a heavy, timber-framed roof. In a woodland setting, the structure is cruciform in plan and square-towered, with stone walls that are sparingly pierced with narrow pointed openings. Above the deep Gothic entrance is a statue of St Hugo, silhouetted against a lancet window that admits light to the choir. The design carries out the tradition of the English parish church. St Hugo was one of 15 churches and chapels selected in 1938 for the circuit exhibition of the American Federation of Art.

At 22 *m.* is an intersection with State 58 (Square Lake Road), which forms a cutoff (L) around the city of Pontiac, rejoining US 10 at the northwestern city limits.

PONTIAC, 25 *m.* (932 alt., 64,928 pop.), in a region that was a favorite camping ground of the Ottawa, is named for Chief Pontiac, who, according to tradition, made his summer abode among the lakes of Oakland County where fish and game were plentiful.

After the War of 1812, a Federal surveyor, apparently misled by trappers, reported that the country north of Detroit was a region of swamps and marshes unfit for anything but wild life. Unwilling to accept this report, a group of Detroit businessmen explored the district for themselves and found it suitable for agriculture. Forming the Pontiac Company, they established a village in 1818 on 1,280 acres of land 'on the Saginaw Trail, at the crossing of the Nottawaseebee [crooked] River.' Two years later, Governor Lewis Cass proclaimed Pontiac the seat of Oakland County, and the the first court was held July 17, 1820, with a village doctor and two farmers serving as justices. By 1822 the community was large enough to support a Baptist church, the first congregation of this denomination in Michigan. The first Presbyterian church in Pontiac was founded by the Reverend E. P. Hastings, when he and a companion were invited to join a card game in a tavern. Refusing the invitation, the Reverend Mr. Hastings turned to the assembled patrons and said: 'You all have at some period in your lives known what it was to have enjoyed church privileges. I want, for one, to see a church building here in Pontiac; and I propose to assess each of you gentlemen \$100 apiece . . . to erect the edifice . . .' The 16 card players were persuaded; a sum of \$1,800 was immediately raised, estimates were proposed, and a building committee was selected. Before the Erie Canal was opened, as many as 40 settlers' wagons entered Pontiac in a day. With the opening of the canal they became so numerous no further count was kept, but a census of 1830 showed a population of more than 4,000 for Oakland County.

Pontiac, sixth city in Michigan, is included by the Bureau of the Census in the Detroit metropolitan area. The city's development, however, has been quite independent. By 1837, there were flour mills, woolen mills, foundries, triphammer shops, and sawmills in the frontier community. The locally famous Hodges House (now Hotel Milner, Saginaw and Pike Sts.), completed in 1840, was said to be the finest hotel west of Buffalo and north of Cincinnati. In 1843, the Detroit &

Pontiac Railroad reached the town, resolving a difficult problem in transportation.

By the middle 1880's, the Pontiac Spring Wagon Works was producing and shipping buggies, surreys, and road carts. Other companies entered the field, and carriage manufacture was the chief industry of the city until the close of the nineteenth century, when automobiles began to appear. As early as 1905, the Rapid Motor Truck Company was organized and began operations. Edward M. Murphy, leading carriage manufacturer, aided by W. C. Durant, later of the General Motors Corporation, founded the Oakland Motor Car Company in 1907. Murphy died in 1909, and General Motors, incorporated in 1908, took control of the firm and continued to produce the Oakland car. Following this expansion, the General Motors Truck and Coach Company acquired the properties of the Rapid Motor firm and began the manufacture of the GMC truck. The Fisher Body Corporation was added later, and other auto parts firms were also established. At the peak of industrial activity in 1929, the city had 64 manufacturing plants in operation. In addition to automobiles, trucks, and taxicabs, Pontiac manufactures rubber products, varnish, automobile accessories, bushings, forgings, machinery, and foods.

Pontiac has three major factories. The PONTIAC MOTOR DIVISION (*open by permission*) of the General Motors Corporation, Glenwood Ave. and Kennett Road, has a factory floor space of more than 4,000,000 square feet and a capacity production of 1,200 cars in an eight-hour day. In the Administration Building hangs a PORTRAIT OF CHIEF PONTIAC, by the artist, Jerry Farnsworth. The painting, financed by a penny-gift civic campaign, is historically authentic, representing the Indian leader at the time of his meeting with Robert Rogers (1760). The factory includes a motor plant, sheet metal plant, parts manufacturing plant, and an assembly plant capable of operating three lines simultaneously. The assembly lines are connected by an overhead conveyor to the FISHER BODY PLANT (*not open to the public*), occupying a 40-acre site on Baldwin Avenue opposite Pontiac Motors. The Fisher plant makes bodies for Pontiac and LaSalle cars and fabricates parts for Oldsmobile. Six miles of conveyor lines are fed by two miles of overhead monorail lines from other departments. Bodies are made from sheet steel, processed for ductility, and shaped in four presses, two of which are four stories high. Normally the plant builds 1,000 bodies in eight hours, delivering them through a covered ramp into the Pontiac factory for mounting on the chassis.

The GENERAL MOTORS TRUCK AND COACH COMPANY PLANT (*open by permission*), East South Boulevard near the city limits, one-half mile long, has 1,500,000 square feet of floor space and represents an investment of \$8,000,000. Here are manufactured GMC trucks, taxicabs, big gun tractors, anti-aircraft searchlight mounts, and other vehicles.

Within Oakland County and in easy reach of Pontiac are 11 State parks. More than 400 lakes offer opportunities for water sports in

summer and for skating, skiing, and tobogganing in winter. The city has 6 municipal parks, 15 supervised playgrounds, a municipal bathing beach, 2 nine-hole golf courses, 6 public tennis courts, and several baseball fields.

One mile from the business district is the \$2,000,000 PONTIAC STATE HOSPITAL (*open 1-4 weekdays*) at the junction of State St., N. Johnson St., and Elizabeth Lake Road, built 1873-8. Formerly known as the Eastern Michigan Asylum, the institution houses 1,800 patients. A neuro-psychiatric unit costing \$700,000 was added in 1938; also included in Michigan's reorganized hospital program is a \$540,000 general hospital unit. There are 6 doctors and 473 employees under a medical superintendent. The institution operates a farm on which are 238 head of registered Holstein Friesian cattle. Established in 1891, the herd has developed a strain known as the 'Pontiac,' an important breed for both milk and beef stock.

1. North from Pontiac on State 24 is LAKE ORION, 11 *m.* (991 alt, 1,369 pop.), often incorrectly called Orion, a country market center. About 1872, it became a popular railroad excursion and picnic point. Twenty-five years later, when an interurban electric railway was built between Detroit and Flint, Lake Orion developed into the leading summer resort of southeastern Michigan.

The village is on the shore of island-studded Lake Orion. For the people who live on the islands and along the irregular shore, an official marine mail delivery is maintained during June, July, August, and September; the route is served daily except Sundays. This is the only delivery of its kind in southern Michigan and one of few such services in the Nation.

2. South from Pontiac on US 24, a two- and four-lane by-pass of Detroit, is a junction with US 25 (*see Tour 9c*), 35 *m.*

The SITE OF THE FIRST FARM ON THE SAGINAW TRAIL, 28.8 *m.*, is marked by a boulder (R). The farm was developed in 1819; two years later the first school session in the county was held in the loft of the barn, and in 1824 the township's first schoolhouse was erected on the property.

DRAYTON PLAINS, 30 *m.* (1,000 pop.), settled by a few families in 1823, began its community development in 1836, when a dam and gristmill were built on the river. The village was an unimportant cross-roads community until Pontiac's industrial development transformed it into a residential district. On the Clinton River, in the southern section of the community, is the DRAYTON PLAINS STATE FISH HATCHERY, established in 1901, with 10 acres of ponds producing 200,000 bluegills and 50,000 bass yearly. New rearing ponds will increase the capacity to 5,000,000 bluegill fingerling and 500,000 bass annually.

At 31 *m.* is a junction with County 436 (Walton Blvd.).

Right on this road to a junction with the Clintonville and North Lake Angelus Road, 2 *m.*; L. here, following the North Lake Angelus Road, to a junction with a private road, 4 *m.*; R. to the M'MATH-HULBERT OBSERVATORY, 4.3 *m.*, one of several belonging to the University of Michigan. Here the University employs motion-picture cameras in its experimental work in astronomical photography.

WATERFORD, 32.5 *m.* (362 pop.), is a small agricultural community. Summer camps for Boy Scouts and religious groups are scattered through the surrounding countryside. WATERFORD HILL (L), 33 *m.*, a former Indian lookout and camping ground, now privately owned, is a local landmark. The 200-foot elevation stands out prominently above the surrounding plain.

GRAND BLANC, 53 *m.* (839 alt., 917 pop.), is a suburban village on the Thread River. In the period before the first British surrender of Detroit, Antoine Campau and a huge trader named Fisher established a post here to divert fur trade from the British. Fisher was known to the Indians as 'Le Grand Blanc' (Fr., the big white), an appellation that was eventually used to designate the settlement itself.

At 55 *m.* US 10 divides; the main route is the left fork, State 10, through.

FLINT, 60 *m.* (780 alt., 156,492 pop.) (*see Flint*).

Flint is at a junction with State 21 (*see Tour 6*) and US 23 (*see Tour 11b*), with which US 10 is united between 71 *m.* and Saginaw (*see Tour 11b*).

SAGINAW, 94 *m.* (593 alt., 80,715 pop.) (*see Saginaw*).

Saginaw is at a junction with State 46 (*see Tour 7a*) and US 23 (*see Tour 11b*).

Section b. SAGINAW to CLARE; 53 m. US 10.

Between SAGINAW, 0 *m.*, and Midland the route roughly follows the course of the Tittabawassee River, in the heart of what formerly was the Michigan pine belt. The largest rollway of pine logs in the world, 43,000,000 feet, once corrugated the banks of the Tittabawassee at Red Keg (now Averill) in this region. On another occasion, a log jam blocked the river for 33 miles upstream, an indication of the tremendous swaths cut in the forests while lumbering was at its height and men were growing rich in a boom that rivaled the Yukon gold rush. Today, between Midland and Clare, only occasional clumps of second-growth trees remind the traveler of the magnificent pine that once covered this territory.

FREELAND, 13 *m.* (780 pop.), on the west bank of the Tittabawassee River, displays in its original frontier buildings a sturdiness typical of many settlements in this territory.

At 21 *m.* is a junction with US 10A.

Left on US 10A is MIDLAND, 2 *m.* (620 alt., 8,038 pop.), formerly a center of the lumber industry, now the home of the DOW CHEMICAL COMPANY PLANT, which sprawls across the southeastern end of the city. This chemical empire, founded by the late Dr. Herbert H. Dow, not only has influenced Midland's physical appearance, creating a well-planned city of neat streets and unusually good architecture, but has shaped and planned the lives of almost every one of its inhabitants. When the lumbermen withdrew from the section, following the green frontier northward, Midland might well have become another town with an industrial past had not Dow begun his series of experiments in the extraction of bromine and other chemicals from the common salt brine underlying this and

other regions of central Michigan. In 1890, Dow organized the Midland Chemical Company, which after financial vicissitudes was succeeded by the present Dow Chemical Company. He perfected the electrolytic cell for the extraction of bromine, lithium, chlorine, and kindred elements. The company was the first in the United States to manufacture indigo and produce synthetic phenol, a compound used in making explosives, and during the first World War undertook the manufacture of mustard gas on a large scale. Dow supplies most of the world's aspirin, selling it by the barrel or carload to other firms, who mold the tablets and stamp them with their brands. Forty tons of Epsom salts are shipped out of Midland each day. Dowmetal (magnesium metal), a product one-third lighter than aluminum, used in the manufacture of machine parts, is made from brine. In all, the plant produces more than 300 pharmaceutical and commercial chemicals.

A large number of Midland residents are young people; 17 per cent are university graduates employed as chemists and research workers by the Dow Chemical Company. The population is further stratified into highly skilled and semi-skilled Dow workers, and into Dow officials, engineers, and students. Many buildings throughout the city have been designed by Alden Dow, youngest son of the company's founder and a student of Frank Lloyd Wright. The Midland Country Club, designed by Dow, is an example of functional design in public buildings, and among private residences are the modest home of F. W. Lewis (on US 10) and the more imposing one of James T. Pardee (Revere and Main Sts.). Especially attractive residential districts are the northwest Park Drive and St. Andrews Road sections, where the conventional square-block pattern of city streets is varied by winding landscaped drives.

The central Michigan petroleum industry, developed as a result of the findings of geologists during brine well drillings, also contributes to the wealth of the community. The Dow Company's brine well records were obtained for study by the Pure Oil Company in the late 1920's, and oil was produced locally in 1928. There are now more than 300 active wells in the area.

The DOW GARDENS (*open 8-6 Wed. in June, July, and August; guide for 1 hr. tour*), West Main Street, were designed by the late Herbert H. Dow and his wife early in 1899. Artificially formed streams cut through 70 acres of tablelands, shaded by Michigan white pine and banked with mountain laurel and rhododendron. A cinder cut is bordered with beds of snapdragon, blue larkspur, and Judas and Japanese trees, boulders are flanked with petunias, blue ageratum, and yucca plants. A swimming pool lies at the foot of a waterfall. In a greenhouse near by orchids and bougainvillea are raised.

The MIDLAND COUNTY COURTHOUSE, Main St. at Fitzhugh St., a modified Tudor building striking for its use of color, was designed by Bloodgood Tuttle, Cleveland architect. The outer walls, constructed of field stone and stucco, are inlaid with designs of pine trees in natural colors and panels portraying the history of the county. These panels, created in a Dow-developed medium, magnesite stucco, colored with pigment and ground glass, were designed by Paul Honore, former Detroit artist, who spent months with Dow scientists developing this fresco technique. In the slate-covered octagonal lobby, mural paintings by Byron Rogers of Detroit symbolize the county's progress—Indian hunters, a pioneer family, a riverman of the lumber era, and harvest fields of the present.

The MIDLAND COUNTRY CLUB, end of St. Andrews Road, a simple buff-colored structure, is an early example of Alden Dow's architecture. Two stories at the front, it follows the contour of the ground and becomes three stories in the rear. Heavy purple carpets in the lounge and dining room blend with the green, salmon, and chartreuse of walls and furnishings.

Left (southwest) from Midland on Benson St. from its junction with Main St. to Patterson St.; R. to the junction with a graveled road, 3.3 m.; R. here, through an open gateway, to the Ox Bow, 3.5 m., scene of the last great Indian battle fought in central Michigan. Here in a yoke-shaped bend of the Chippewa River were rich hunting and fishing grounds jealously guarded by the Chippewa. Envious neighbors were repeatedly repelled; in 1830, however, 4,000 painted Sauk warriors camped on the western bank of the river, while, within the bend,

the Chippewa gathered an equally large force. In the ensuing battle, hundreds were killed before the Sauk withdrew. The victorious Chippewa buried their dead across the river in one large mound; in 1937, a road shovel unearthed some of the skeletons.

At 23.5 *m.* is a junction with Sugnet Road.

Right on this road to the DOW HOUSING PROJECT, (R) 0.7 *m.*, initiated by the Dow Chemical Company (*see above*) in 1934, to provide low-cost housing for employees on the outskirts of the overcrowded city. The project, which covers 42 acres, is entirely a company development, designed and executed by employees; in 1937, it included 52 gas-heated homes of medium size, on lots 100 feet by 280 feet. The rental rate is standard, though rebates are offered to encourage improvements and landscaping. The total cost of each two-bedroom house was approximately \$3,500.

AVERILL, 29 *m.* (30 pop.), was famed in its day for huge log roll-ways and river drives. Known as Red Keg, its uproarious lumber life has been depicted in two of Eugene Thwing's novels, *The Man from Red Keg* and *The Red Keggars*. The name 'Red Keg' was borne first by a widely patronized saloon in the vicinity.

At 30 *m.* is a junction with State 30.

Right on State 30, in an otherwise sparsely settled region, is EDENVILLE, 11 *m.* (95 pop.), known in lumbering days as 'Camp Sixteen'. Here Michigan's once sturdy lumberjacks, now white-haired, return each year to participate in the Lumberjack Festival (*last Wed in Aug; adm. free*), for which a camp has been built on a plateau overlooking the Tittabawassee River. The woodsmen engage in burling contests on the Tittabawassee and in top-loading activities, as in the days when the crash of falling timber reverberated throughout the State. A LUMBERJACK MUSEUM displays many lumbering relics, pictures, and the 'one and original' rifle used by Paul Bunyan. The Lumberjack Picnic is sponsored and financed by Frank I. Wixom of Edenville.

The highway crosses SALT CREEK, 32 *m.*, once frequented by Indians and forest animals for the salt that crystallized from brine springs. At Salt Creek, Douglass Houghton in 1841 supervised the sinking of the State's first salt well, the beginning of a series of borings that led to the establishment of the Dow Chemical Company and the central Michigan oil and gas fields.

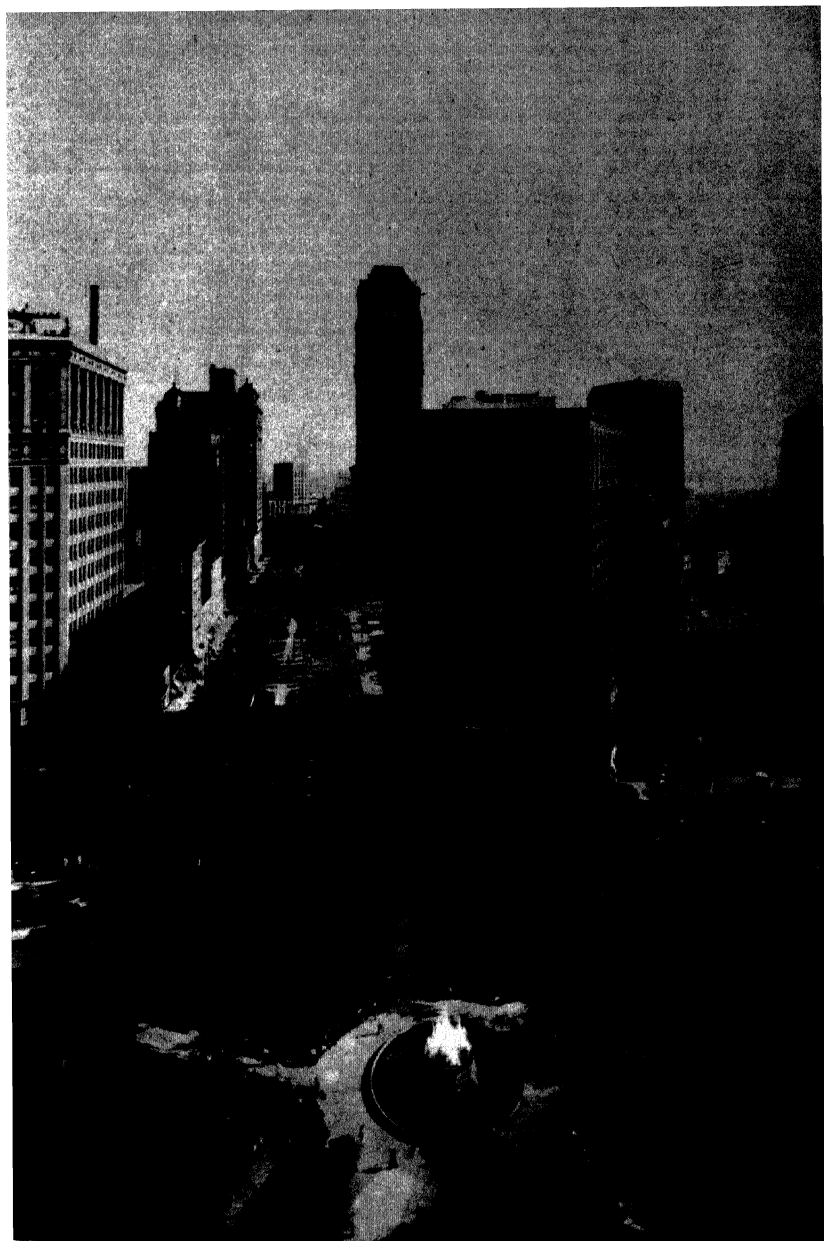
NORTH BRADLEY, 37 *m.* (119 pop.), a farm trading center, is at the junction with State 18.

Right on State 18 is BEAVERTON, 12 *m.* (830 alt., 528 pop.), a former lumber city and later an agricultural center.

GLADWIN, 20 *m.* (789 alt., 1,248 pop.), was established by lumbermen in 1873. The Michigan Department of Conservation has a district office here. Hunting and fishing in the area are excellent. Twelve-acre GLADWIN STATE PARK has ample woods and frontage on the Cedar River. Northward, State 18 leads to PRUDENVILLE, 49 *m.* (100 pop.), at a junction with US 27 (*see Tour 12a*).

CLARE, 53 *m.* (838 alt., 1,491 pop.), named for County Clare in Ireland, was platted on the Flint and Pere Marquette Railway in 1870 and incorporated as a village in 1879. Three industrial plants manufacture house trailers, highway equipment, and cheese. In 1930,

In the Cities and Towns



Photograph by courtesy of Manning Bros., Inc.

GRAND CIRCUS PARK AND (LEFT) WASHINGTON BOULEVARD, DETROIT

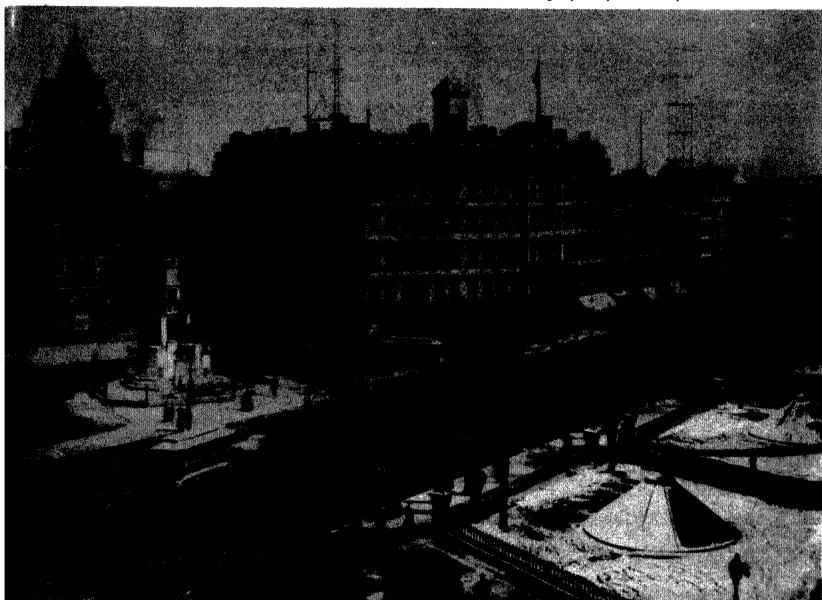


DETROIT SKYLINE

Photograph by William A. Kuenzel; courtesy of Detroit News

DOWNTOWN DETROIT IN 1895

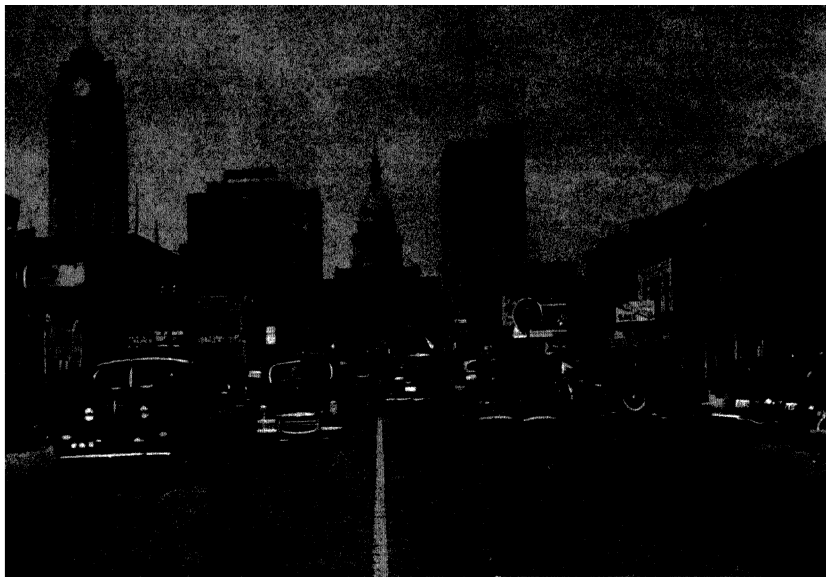
Photograph by courtesy of Detroit News





Photograph by courtesy of the architects, Albert Kahn, Inc.

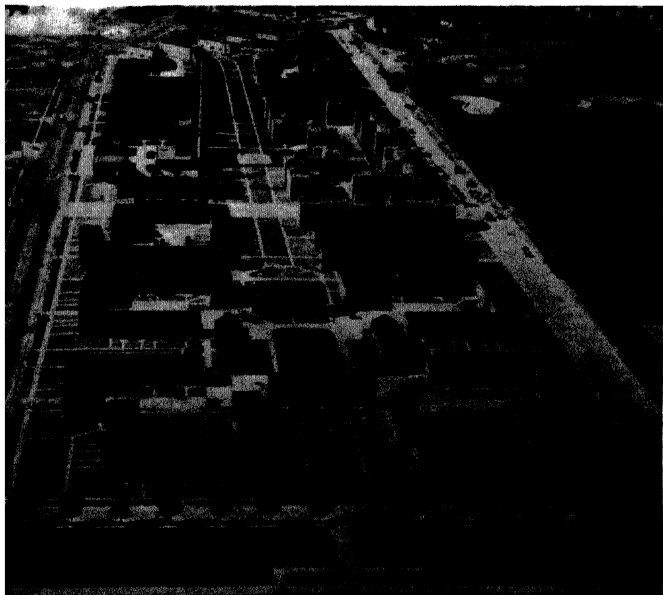
THE FISHER BUILDING, DETROIT

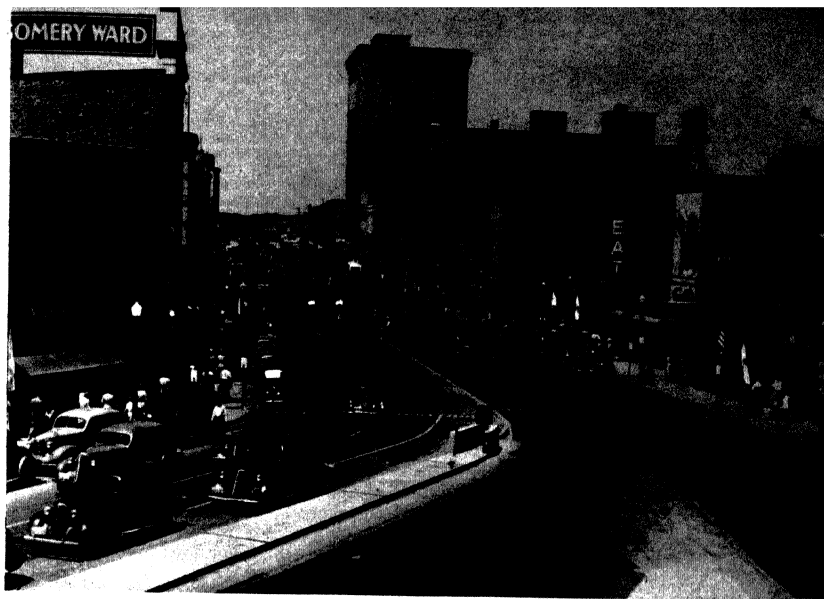


Photograph by Wilson; courtesy of Work Projects Administration
MICHIGAN AVENUE, LANSING—STATE CAPITOL IN BACKGROUND

AIRVIEW, PARKSIDE HOUSING PROJECT—A USHA DEVELOPMENT

Photograph copyrighted by Detroit News





Photograph by Wilson; courtesy of Work Projects Administration

EAST GENESEE STREET, SAGINAW

SAGINAW STREET, FLINT
Photograph by Wilson; courtesy of Work Projects Administration





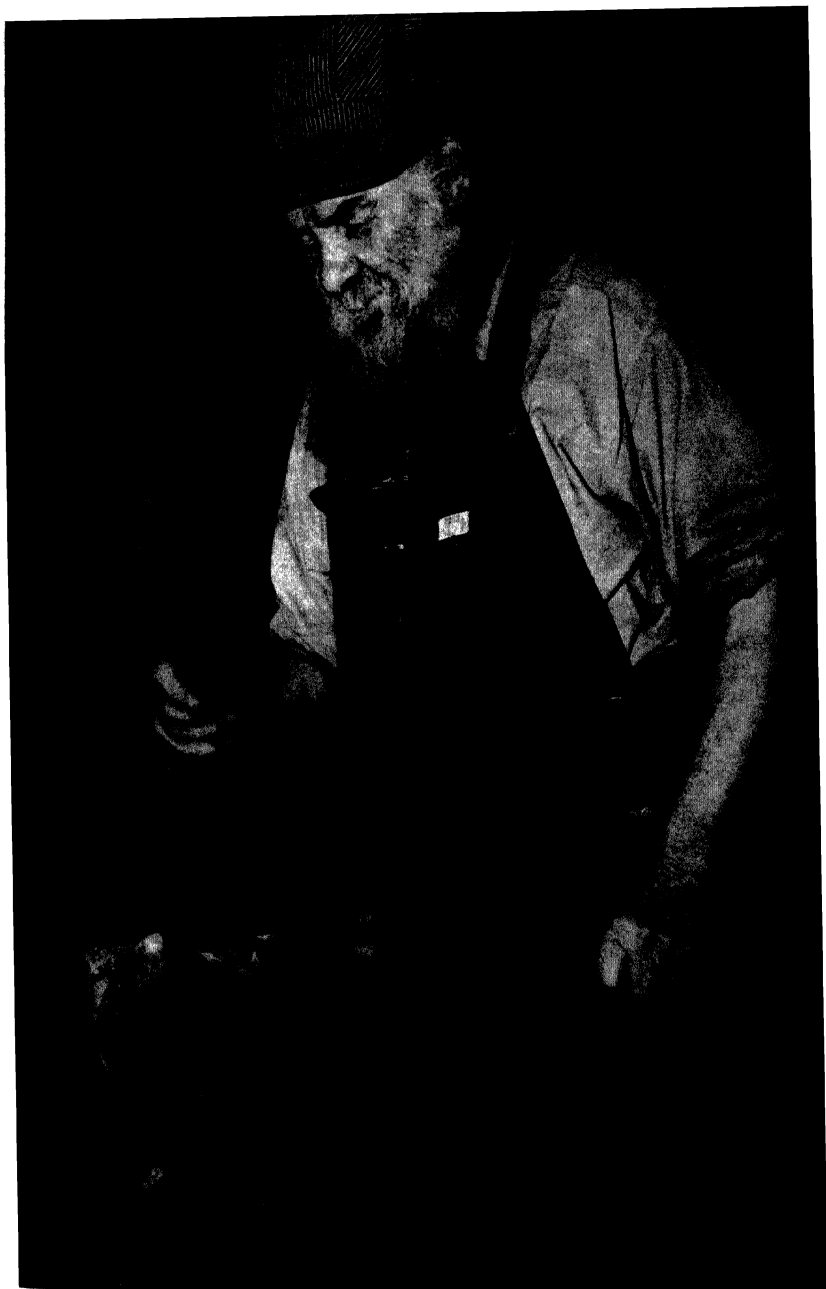
Photograph by courtesy of Ford Cary Studio

CONCERT AT NATIONAL MUSIC CAMP, INTERLOCHEN (Walter Damrosch, Conductor)

CITIZENS IN DUTCH COSTUME SCRUB STREETS OF HOLLAND DURING ANNUAL TULIP FESTIVAL

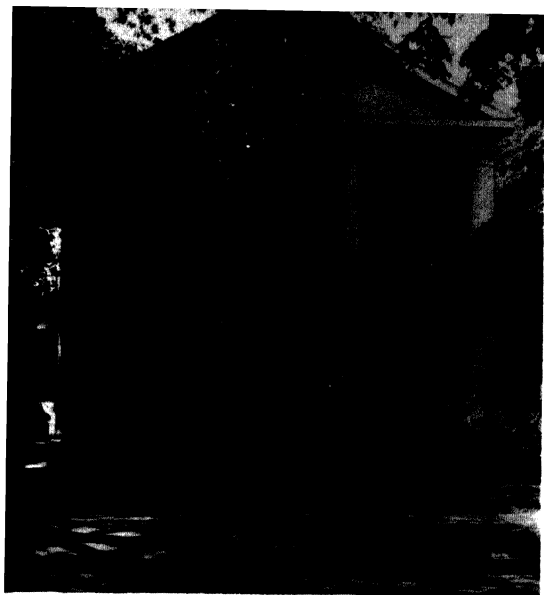
Photograph by courtesy of Holland Chamber of Commerce



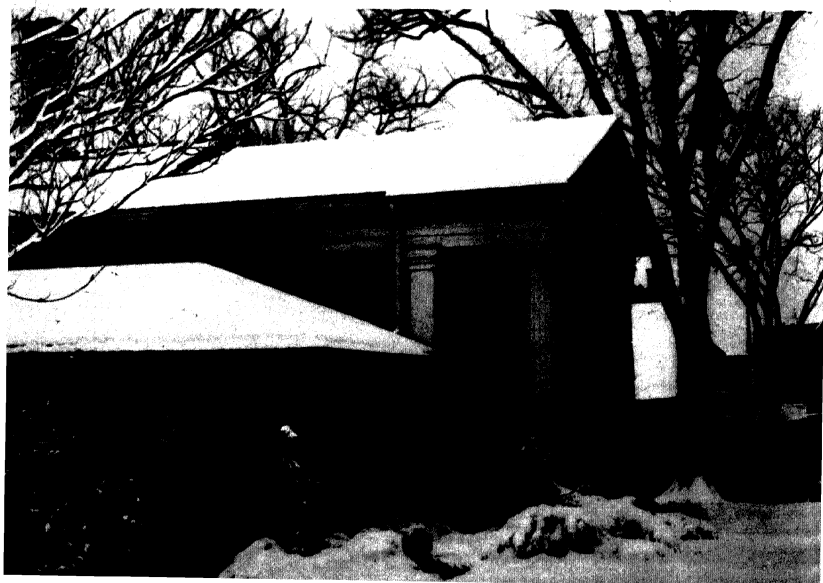


Photograph by Vachon; courtesy of Work Projects Administration

BLACKSMITH AT HOUSE OF DAVID, A RELIGIOUS COMMUNITY IN BENTON HARBOR



BREAKEY TOWN HOUSE, YPSILANTI



ART GALLERY (PIKE HOUSE), GRAND RAPIDS

the Vernon oil and gas fields, three miles south of Clare, were discovered, their development providing an additional source of revenue.

The CLARE HIGH SCHOOL, E. 8th St. between Pine and Hemlock Sts., was the first Michigan school outside the metropolitan Detroit area to sponsor works by artists of the WPA Art Project. Centered in the lawn in front of the auditorium is a STATUE OF A PIONEER MOTHER, designed and executed by Samuel Cashwan, Detroit sculptor; it represents a seated woman, holding a child in her right arm, a rifle in her left. In the school auditorium are four recessed MURAL PANELS by Gerald Mast, Detroit painter. Simple, rich in color, the murals portray the academic and recreational phases of school life and Clare County's principal occupations—agriculture and the production of gas and oil.

Clare is at a junction with US 27 (*see Tour 12a*).

Section c. CLARE to LUDINGTON; 91 m. US 10.

Between CLARE, 0 m., and Ludington, the highway traverses a thinly settled region of lakes, streams, and wild lands, with some small agricultural communities.

FARWELL, 5 m. (933 alt., 422 pop.), like Clare, was founded in 1870 on the newly built Flint and Pere Marquette Railway. In 1903, Josiah L. Littlefield, Clare County pioneer, promoted a venture to manufacture cement from marl deposits in Littlefield Lake, ten miles southwest of Farwell. The Portland Cement Company later erected a huge plant and built tenant houses and a roadbed to the lake. After three years, and an investment of \$175,000, the sponsors needed \$90,000 more to equip the railway and dredge the lake bottom, but financial aid was not forthcoming, and the plant was torn down and the machinery removed. A single weathered tenant house and gaping cement foundations in the northwest section of the village are all that remain of what has come to be known as 'Farwell's Folly.' Fishermen and hunters are attracted to Farwell because of the surrounding woods and streams. Well-kept LITTLEFIELD PARK, within the village, site of a soldiers' monument, is equipped for tourists.

REED CITY, 40 m. (1,035 alt., 1,792 pop.), in the center of one of the best fishing regions of central Michigan, is a gathering place for sportsmen during the spring and summer. A roller mill, a flour mill, and a woolen mill furnish steady employment to residents. Early settlers were mainly Germans fleeing from the aftermath of the revolution of 1848, and German order and industry mark the city distinctively.

Reed City is at a junction with US 131 (*see Tour 14a*).

CHASE, 48 m. (298 pop.), a cattle-buying and shipping point, is in the Manistee National Forest, a popular recreational area.

IDLEWILD, 55 m. (150 pop.), for the most part south of the highway, on Idlewild Lake, is a Negro recreational center. Negro resorters increase the summer population to 3,000. There is a hotel with 60 rooms, in addition to many cottages for the summer trade.

BALDWIN, 59 *m.* (639 alt., 518 pop.), at the crossing of two lines of the Pere Marquette Railway, is the seat of Lake County. The north branch of the Pere Marquette River (*boating and fishing*) flows through the village, and within a radius of 10 miles there are 52 lakes and numerous streams, all stocked with game fish. On the river at 7th St. is the **BALDWIN TROUT REARING POND**, a small station providing fingerlings for the lakes and streams of Lake County and the adjoining territory.

BRANCH, 72 *m.* (50 pop.), a station on the Pere Marquette Railway, was founded in 1875 as a lumbering center. The two sawmills still operating in the village are active only for short periods in summer. The chief industry is pickle-making.

SCOTTVILLE, 83 *m.* (679 alt., 1,002 pop.), a small city with a grain elevator and canning factories, provides a market for agricultural products grown near by. Settled in 1876, Scottville had three names in concurrent use until 1907, making it necessary for railroad conductors on trains passing through the place to call out all three names. First known as Mason Center, the settlement was renamed Sweetland in 1881 in honor of James Sweetland, who platted the community. It was incorporated as a village in 1889 and given a third name, Scottville, in honor of Hiram Scott, a pioneer citizen. However, many advocates of Mason Center and Sweetland continued to use their favorite name. Despite the resultant confusion, the village was burdened with three names until 1907, when it was incorporated as a city. The controversy was settled by the toss of a coin at the city hall.

Scottville is at a junction with US 31 (*see Tour 15b*), with which US 10 is united for 6.5 miles.

LUDINGTON, 91 *m.* (587 alt., 8,898 pop.), at the mouth of the Pere Marquette River, is one of Michigan's important shipping points. It borders both Lake Michigan and Pere Marquette Lake, which are separated by a narrow strip of duneland. Pere Marquette Lake provides a safe harbor for large passenger boats, car ferries, and lake freighters. Named for James Ludington, a lumberman who operated here in the 1880's, Ludington was originally called Marquette, in honor of Father Jacques Marquette, missionary-explorer, who died here in 1675.

On a knoll in **PERE MARQUETTE PARK**, near the harbor, is a boulder marking the **FIRST GRAVE OF FATHER MARQUETTE**. Two years after his death, Indian friends carried his remains to the Roman Catholic mission at St. Ignace, and later all but a few bones were again removed, this time to Marquette University at Milwaukee. Ludington commemorates Father Marquette's life in a Père Marquette Memorial Pageant held for three nights each August. The event, instituted in 1935, is restrained and solemn. A parade on Saturday, in which the schools of the region take part, portrays episodes from the Jesuit's life; on Sunday, interdenominational church services are held. The Roman Catholics sing a pontifical High Mass on the bluff overlooking the lonely sand dunes on which Father Marquette died.

Daily, during the summer, supervisors conduct recreational activities on LAKE MICHIGAN BEACH. On this same beach is WATER WORKS PARK, a popular tourist camp. On Lincoln Lake, adjoining the northern city limits, is CARTIER PARK, also a camping site. The Pere Marquette, Lincoln, and Big Sable Rivers are favorites with canoeists and fishermen.

Right from Ludington on State 116 to EPWORTH HEIGHTS, 2.5 m., a summer colony and golf course on the sand dunes above Lincoln Lake Operated by the Epworth Assembly, a Methodist organization, it attracts many vacationists.

HAMLIN LAKE, 5 m., is maintained at constant level by a dam, built during the lumbering era, across the Big Sable River. Between Hamlin Lake and Lake Michigan are LUDINGTON DUNES PARK and McLAUGHLIN DUNES PARK. Much of the area is covered with the shifting sand dunes common along the Lake Michigan shore.

LUDINGTON STATE PARK (*equipment free*), 8 m., covers 3,000 acres of camp sites and scenic trails along the dunes and shore of Hamlin Lake. Attractions include shelter houses of field stone, equipped with fireplaces, tables and benches, and a recreation building with a community room and showers. Auto tours and hikes through the park and the adjacent MANISTEE NATIONAL FOREST may be arranged (*guides free*).

Tour 5A

Junction with US 10—Cranbrook Foundation; 1.5 m. Lone Pine Road.

Macadam roadbed.

No accommodations.

Lone Pine Road branches left from the junction with US 10 (*see Tour 5a*), 0 m., 19 miles northwest of the Detroit City Hall on Woodward Avenue.

CRANBROOK FOUNDATION (*grounds open at all times*), 1.5 m., is on the 300-acre estate of its founders, Ellen Scripps Booth and George G. Booth, president of the *Detroit News*. The Booths purchased a farm in Bloomfield Hills in 1904 and named it after the village in Kent, England, where Mr. Booth's father was born. Their transformation of the farm lands into a magnificent estate was made with the intention, now largely realized, of ultimately putting the entire development to public use. In 1927, after Christ Church, Brookside School, and Cranbrook School had been built, the Cranbrook Foundation was created and turned over to trustees. Only the Booth residence and a Greek theater and pavilion remain private. The founders gave more than

\$20,000,000 to construct and endow the five schools and the church that, with a stadium, an observatory, instructors' houses, and an outdoor theater, now make up the Cranbrook group.

Cranbrook Foundation's resources are devoted solely to educational purposes, emphasizing the extension and improvement of cultural facilities in Michigan. The Academy of Art and the Institute of Science supplement the education of Cranbrook students and contribute, through lectures, exhibits, and publications, to the enjoyment and education of the community at large. Although the schools are private, many scholarships are offered to candidates who can meet the rather strict requirements.

CHRIST CHURCH, CRANBROOK, Protestant Episcopal (*open 9-4 Mon.-Fri.; 9-12 Sat.; 9 A.M.-10:30 P.M. Sun.; services 11 and 4 Sun.*), stands upon a ridge at the southwest corner of the intersection of Lone Pine and Cranbrook Roads (L). French Gothic in style, it was designed by the late Bertram G. Goodhue, whose plans were executed by his associates. The church was consecrated in 1928. Its walls are of coursed rubble Nesahnook sandstone with Bedford ashlar and trim; the roof is of rough, graduated slate. The stone tracery of the windows is in the sixteenth-century French style. Features of the exterior are the huge buttresses that terminate in carved figures by Lee Laurie and Ulric Ellerhausen. In the 118-foot tower (*open by permission*) is a carillon (*concerts 5 P.M. Wed. and 9 P.M. Sun., June through Sept.*) of 62 bells ranging in weight from 48 to 9,408 pounds. They were made in England and dedicated in 1928 by Anton Brees, formerly bellmaster at Antwerp Cathedral, Belgium.

The interior walls of light-gray plaster harmonize with the stone of the high arches and window frames. The deep-arched roof is of very dark oak, as are the screens and pews. The church contains examples of the work of artists and craftsmen of every century since the twelfth; special recognition has been given the work of contemporary artists. Outstanding among the examples of modern craftsmanship is the fresco on the walls of the sanctuary by Katherine McEwan, formerly of Detroit, who worked for more than three years on this mural. Carving by the American woodcarver, Johann Kirchmayer, and carved figures by Anton Lang, formerly of Oberammergau, are employed in the reredos, lectern, and elsewhere. The largest of the stained-glass windows, set in the western wall, was designed by James H. Hogan to portray symbolically the part women have played in civilization.

BROOKSIDE SCHOOL, CRANBROOK (*open 9-11 A.M. by permission*) is at the northeast corner of Lone Pine and Cranbrook Roads (R), cater-corner from the church, on a branch of the River Rouge. A day school, it prepares students for Cranbrook, Kingswood, and other schools. Its curriculum provides six elementary grades, each limited to ten girls and ten boys, as well as a kindergarten for children between the ages of three and five. The regular course of studies is supplemented by an introduction to music, art, and science.

The school was opened in 1922 in a small meetinghouse, erected in

1918 to serve as a place of worship for residents in the vicinity of Cranbrook. It was enlarged in 1929 from plans prepared by Mr. Booth's son, Henry Scripps Booth, the new part being designed to harmonize with the style adopted for the other Cranbrook buildings.

All other units of the Foundation have been designed by Eliel Saarinen, eminent architect from Helsingfors, Finland, for two years visiting professor of architecture at the University of Michigan. The arrangement of buildings follows a well-considered scheme that enabled the architect to take full advantage of an unusually fine natural setting. As preparation for the work, he lived in and absorbed the atmosphere of the environment, afterward creating a group of buildings of beauty and distinction, varied but harmonious in style and bearing the imprint of his individuality. While essentially original, the architecture is related in theory to the modern organic style. In 1931, Mr. Saarinen was awarded the gold medal of the Architectural and Allied Arts Exposition of the New York Architectural League. He is now president of the Cranbrook Academy of Art.

CRANBROOK SCHOOL (*open 3:30-5 Wed. and by permission*) is on the north (R) side of Lone Pine Road half a mile west of Cranbrook Road. The Foundation's largest unit, Cranbrook is a preparatory and cultural school for boys from the seventh through the twelfth grades. The buildings, of mellow, dark-red brick with sandstone trim, are grouped around a number of courtyards. The main building, surmounted by an octagonal observatory tower with a movable dome, is two stories high and houses classrooms, offices, laboratories, and workshops; adjoining it are the library and the study halls. Also connected with the main building are dormitories for resident students.

Elsewhere on the 90-acre campus are an academic building, an infirmary, an auditorium, a gymnasium, a music building, a dining hall, a stadium, and several playing fields. In the center of the main quadrangle is a fountain, with a carved marble shaft, modeled after that in the Monreale Cloisters, at Palermo, Sicily. Statues and fountains, many of them by Carl Milles, widely known Swedish sculptor and resident head of the art academy's sculpture department, decorate both the grounds and the buildings.

The school has a capacity of 250 students, about 200 of whom can be accommodated as residents. There is an average of one instructor for every ten students. In addition to academic work, the curriculum includes courses in arts, crafts, science, music, and dramatics. The combined facilities of the art academy and of the science unit provide thorough instruction and allow the students to develop and pursue individual interests.

CRANBROOK ACADEMY OF ART (*only galleries and library open: 9-5 Mon.-Fri., 2-5 Sat. and Sun.*), north of Lone Pine Road, occupies a group of five buildings along the right-hand side of the drive that leads to the academy and to Cranbrook School. All courts and ell's face away from the entrances and overlook a wide expanse of rolling country. Established in 1932, the academy, favorably known in America and

abroad, provides unusual facilities for the advanced study of architecture and civic design, sculpture and painting, and, in its intermediate school, courses in design, modeling, weaving, pottery and ceramics, costume design, and metal craft. It also sponsors exhibitions of the finest contemporary art from all parts of the world, intended to demonstrate the trend of modern design and thus contribute to the development of the students. The several art collections and the Library of Art and Architecture, which contains more than 6,000 volumes and is one of the finest of its kind in the United States, are available to students, faculty, and the public.

KINGSWOOD SCHOOL, CRANBROOK (*open 3:30-5 Wed. and by permission*), on Cranbrook Road half a mile north of Brookside School, is a girls' preparatory and cultural school accommodating about 50 residents and 150 day students. Opened in September 1931, it is considered by some recognized critics to be even more interesting architecturally than Cranbrook School. The spacious building, which overlooks Cranbrook Lake, consists of joined quadrangles with low wings, surrounded by a 50-acre campus, the natural beauty of which has been greatly increased by attractive landscaping. The rugs, curtains, and furniture of the school are the result of an experiment in harmonizing Old World handwork and New World mass production; they were produced in quantity by machine from models fashioned by artists connected with the art school.

Organized as a six-year high school, Kingswood offers both a college preparatory and a general course. It provides excellent facilities for the study of fine and applied arts; advanced students are recommended for study at the Academy of Art and the Institute of Science, members of whose staffs also give instruction at Kingswood.

CRANBROOK INSTITUTE OF SCIENCE (*open 2-5 daily*), in the wooded area west of Kingswood School, was established in 1931, but the increasing scope of its activities made necessary the erection of a larger building. Dedicated in 1938, the new building contains laboratories, a large library, an auditorium, and more than 600,000 cubic feet of space available for exhibits and workrooms.

The institute offers students of the Cranbrook schools a broad range of scientific pursuits under highly trained supervision; the public is permitted to attend some of the lectures. Also open to the public is the institute's extensive collection. The telescope in the observatory, used both for class instruction and for original and co-operative research, is equipped for astronomical photography.

Tour 6

Port Huron—Flint—Grand Rapids—Holland; 203 *m.* State 21.

Roadbed hard-surfaced throughout.

Grand Trunk Ry. parallels route between Port Huron and Flint and between Owosso and Grand Rapids, Pere Marquette Ry. between Grand Rapids and Holland

Accommodations at short intervals.

Section a. PORT HURON to FLINT; 70 m. State 21.

Between Port Huron and Flint, State 21 crosses level farm lands once heavily timbered with hardwoods and occasional stands of white pine. En route are numerous recreational areas.

PORT HURON, 0 *m.* (599 alt., 31,361 pop.) (*see Port Huron*).

Port Huron is at a junction with US 25 (*see Tour 9*).

At 12.5 *m.* is a junction with a paved road.

Left on this road is GOODELLS, 0.5 *m.* (250 pop.); L from Goodells is a COUNTY PARK, 1 *m.*, with several acres of well-kept grounds, including free camping areas and athletic and play fields, fireplaces, picnicking facilities, and a spring of drinking water. A small stream, spanned by several rustic bridges, meanders through the park.

At 20 *m.* is the northern junction (R) with State 19.

Right (straight ahead) on State 19 to the crossing of Mill Creek, the SITE OF BROCKWAY, 4 *m.*, a former lumbering center that faded into oblivion, when a branch of the Pere Marquette Railway was routed through Brockway Center (now Yale). Most of the houses of Brockway were moved to Yale on skids, over an old corduroy road that is now State 19.

YALE, 9 *m.* (799 alt., 1,345 pop.), centers its economic life upon a canning plant and a woolen mill that employs 400 workers and has been operated by the same family since 1881.

CAPAC, 28 *m.* (814 alt., 837 pop.), was named, no one knows why, for Manco Capac, traditional founder of the Inca dynasty.

At 31 *m.* is a junction with an earth road.

Left on this road to a large PEAT BOG, 1 *m.*, the site of a peat-products manufacturing plant.

IMLAY CITY, 36.5 *m.* (500 alt., 1,495 pop.) (*see Tour 10*), is at a junction with State 53 (*see Tour 10*).

A small State-owned HIGHWAY PARK (*picnic facilities: approved spring water*), 40.5 *m.* (L), occupies a grove reached by a rustic bridge.

At 41 *m.* is a junction with an earth road.

Left on this road to ELK LAKE, 0.5 m., 120 acres, with a gravel beach, thick woods on the surrounding hills, and camping facilities.

LAPEER, 49 m. (827 alt., 5,008 pop.), was founded in 1831 and by 1840 had attained a population of 755. Its name is derived from La Pierre (Fr., the stone), no doubt suggested by the flints found along the banks of the Flint River. Formerly a lumbering village, Lapeer today manufactures bookcases, cabinets, and cedar chests.

CRAMTON PARK, stretching for ten blocks along the Flint River, is a recreation center patronized by thousands during the summer. An old house at 143 Pine St., once the social center of the community, accommodates the LAPEER CITY HOSPITAL (*open 2-4 daily*). Of no particular architectural interest from without, the three-story, mansard-roofed wooden mansion, said to have bankrupted the builder, contains a fine spiral stairway and black walnut balustrade. RADIO STATION WMPC, with an antenna 160 feet high, is owned and operated by the First Methodist Protestant Church, and is situated in the basement of the church at Liberty St. and Madison Ave.

THE LAPEER COUNTY COURTHOUSE, Nepessing and Court Sts., is the oldest courthouse in Michigan that is still in use. Constructed in the style of the Greek Revival by the Honorable Alvin N. Hart in 1837 at a cost of \$10,000, it was sold to the county for \$3,000. The design of the structure was seriously marred in 1938 by the cutting of three doorways through the broad steps of the portico to give access to basement rooms.

North from Lapeer on State 24 to a junction with Coulter Road, 5 m.; L. to the junction with the Millville Road, 7 m.; R. here to KING'S RANCH (R), 9.5 m., two sections of woodland through which wind 40 miles of cow trails and bridle paths. The ranch includes five spring lakes, the largest of which is LAKE M'KEEN (*boating, bathing, fishing*), 100 acres in size, a wild-life sanctuary protected by the State department of conservation. Because of these waters, the wild life, and the beauty of the area, the place also serves as a dude ranch and summer resort. Boarders (\$10 weekly) may ride around in old-fashioned buckboards and other horse-drawn vehicles, or rent saddle horses (\$1 an hour). For motorists there is a trailer camp (*small fee*) and picnic grounds.

THE LAPEER STATE HOME (*open by permission*), 51 m. (L), is an institution for the feeble minded and epileptic, opened in 1895. Built on the cottage plan, it is a city in itself, occupying about 90 buildings and renting 355 acres in addition to its own 898 acres. The school employs 24 teachers, 6 doctors, about 15 nurses, and scores of attendants. Enrollment is 4,269, with a waiting list of 1,355. Attempts are made through training to develop the intellectual faculties of the patients. After reaching their academic limit, the children are given industrial training to the extent of their individual capacities.

At 52.5 m. is a junction with a graveled road.

Left on this road to the junction with a graveled road, 1.5 m.; R. here to NEPESSING LAKE (*golf course and clubhouse (R), boat liveries, hotels, stores, dance halls, picnic and camping grounds*), 2 m. The lake covers 400 acres and has a gravel beach.

Near the foot of a hill at 53.5 *m.* is the junction (R) with Gray Road, which leads northward through a section of Lapeer County that contains many lakes.

POTTER LAKE (R), 57.5 *m.*, the largest in Lapeer County, covers 450 acres. It is the site of the Flint Industrial Mutual Association park and dance pavilion and is well equipped for tourists and campers.

DAVISON, 60.5 *m.* (790 alt., 1,298 pop.), which serves the adjacent farming community, is the home of many workers employed in Flint factories. Horse races are held during June at ROSEMOOR PARK (south end of Main St.).

Right from Davison on State 15 to the junction with a paved road, 4 *m.*; L. here to the junction with a graveled road, 5.5 *m.*; R. to the RICHFIELD COUNTY PARK (*grills, tables, fireplaces, swimming*), 6 *m.*, recently developed by the WPA. Its 97 acres of virgin pine are interspersed with oaks, hazelnut bushes, and a few giant sycamores. Long driveways with rustic fences thread the park, and rustic bridges span numerous rivulets that flow into the Flint River.

FLINT, 70 *m.* (780 alt., 156,492 pop.) (*see Flint*).

Flint is at a junction with US 10 (*see Tour 5a*) and US 23 (*see Tour 11b*).

Section b. FLINT to HOLLAND; 133 m. State 21.

West of FLINT, 0 *m.*, the route traverses a rich agricultural district. At Grand Rapids the route turns southwest toward Holland and the Lake Michigan shore.

At 22 *m.* is a junction with County 467.

Left on this road is CORUNNA, 1 *m.* (757 alt., 1,936 pop.), seat of Shiawassee County and site of a furniture factory, a cigar factory, flour mills, and some active coal mines. The flour mill across the river from a gristmill was built in 1843 and remodeled in 1876; it is still in operation. M'CURDY PARK, a wooded plot along the Shiawassee River at Corunna and Norton Sts., has picnicking facilities and a casino for dancing and basketball games, but no camping accommodations.

OWOSSO, 25 *m.* (737 alt., 14,496 pop.), is on the steep-banked Shiawassee River, log-jammed in lumbering lays but now a quiet stream. The shanty houses, old houseboats, log booms, and stumps of spiles that disfigured the banks as late as 1890 aroused the interest of James Oliver Curwood (1878-1927), writer of outdoor stories, who was born here. Farther up the river were communities of remnant Indian tribes, with whom Curwood often lived, hunting and trapping as they did. His studio, on John Street overlooking the banks of the Shiawassee, is one of the show places of the city. It is often referred to as CURWOOD CASTLE because of its architectural resemblance, on a small scale, to a Norman fortress. The palatial house in which he lived is across the river, at the intersection of Williams and Shiawassee Streets. What is said to be the first house in Owosso, a LOG CABIN built in 1836, on West Main St., is maintained as a historical museum. The building is in excellent condition. Thirty small industries have

replaced lumber as Owosso's chief source of revenue; five parks, connected by six miles of boulevard drives, add to the beauty of the city.

Right from Owosso on State 47, originally an Indian trail, is OAKLEY, 10 m. (680 alt., 218 pop.), the principal market place for the farmers of the township; R. from Oakley on a County Road to HAVANNA MILL (R), 11.5 m., erected in 1856 on the Shiawassee River by the Parshall family, who still use the mill to produce flour by water power. In the panic of 1893, flour was a medium of exchange in the Thumb, and the term 'Legal Tender' was registered, and is still used, as a trade name for the product of the Parshall mill.

ST. JOHNS, 45 m. (765 alt., 3,929 pop.) (*see Tour 12b*), is at a junction with US 27 (*see Tour 12b*).

IONIA, 72 m. (648 alt., 6,562 pop.), which lies in the hills along the winding Grand River, was established in 1833 by settlers, who purchased from the Indian occupants five bark wigwams and their fields of corn, melons, and squash. Today it is a small industrial city with several factories producing furniture, pottery, and flour. An important shipping point for beans, Ionia is best known for its two State penal institutions, only one of which is within the city limits. The MICHIGAN REFORMATORY, on West Main Street, is for first offenders under 21 years of age. RIVERSIDE PARK, on South Dexter Street, near the bank of the Grand River, includes the IONIA FAIR GROUNDS, where a yearly exposition is held in late August. On the grounds are a race track, grandstand, and exposition buildings.

Right from Ionia on County 468, known as old M-21, to the IONIA STATE HOSPITAL (L), 23 m., organized in connection with the State Reformatory for the housing of the criminal insane.

BERTHA BROCK MEMORIAL PARK (L), 74 m., consists of 30 acres of natural landscape that have been improved with a community lodge and an outdoor swimming pool.

LOWELL, 87 m. (639 alt., 1,919 pop.), settled in 1821 at the mouth of the Flat River, where there was then an Indian village of 400 inhabitants, is the scene of an annual Show-Boat Festival in early August. One year as many as 16,000 persons lined the banks to watch the celebration, which usually starts at twilight when an 80-foot barge, fitted to resemble a Mississippi River steamboat, floats around a bend in the river and pulls in at the village wharf. The boat is greeted by a steam calliope on shore, while on board the sound of a band and a 100-voice chorus rises above the noise of churning paddle wheels. Lumberjack fiddlers, cakewalk dancers, harmony singers, boxing cats, clowns, tumblers, and a dance orchestra disembark.

Lowell has a large milling plant, a hatchery that ships annually 500,000 baby chicks, and a button factory cutting buttons from mussel shells, purchased from more than 300 clam-diggers on the Grand, Flat, and Thornapple Rivers. The rates of the MUNICIPALLY OWNED POWER PLANT are so reasonable that 325 of 400 homes are equipped with electric ranges.

Right from Lowell on State 66 is **BELDING**, 16 m. (700 alt., 4,140 pop.), the home of the only silk mill in Michigan. This plant has three units and as many workers' dormitories. Founded in 1864 by the Belding brothers, the mills were acquired in 1928 by New York bankers. During the depression of the following years, the mills closed down because the city did not provide a \$100,000 bonus to keep them operating. One company official declared, as he headed back to New York, that the city 'would die, grass would grow in the streets, and doves would make roosting places of the entrances to the stores.' But the mills were refinanced, through the combined efforts of the citizenry and the board of commerce, and are once more functioning at capacity.

Ahead to **GREENVILLE**, 24 m. (813 alt., 4,730 pop.), and L. on State 57 to a junction with US 131, 38 m. (see *Tour 14a*)

ADA, 96 m. (450 pop.), founded in 1821, a former trading post and water-power site for sawmills, is now principally a farming settlement. A marker (L) on the main street (State 21) denotes the **SITE OF THE RIX ROBINSON TRADING POST**, named for the first permanent white settler in this region. **CHIEF HAZY CLOUD PARK**, north of the village on the Grand River, provides recreational facilities.

GRAND RAPIDS, 107 m. (655 alt., 168,592 pop.) (see *Grand Rapids*).

Grand Rapids is at a junction with US 16 (see *Tour 4b*) and US 131 (see *Tour 14a*).

GRANDVILLE, 113 m. (602 alt., 1,346 pop.), originally platted by a company of Eastern land operators, is in a region rich with Indian mounds, villages, and burial grounds. Plaster and stucco making, celery and wheat farming, and the manufacture of metal products are the vicinity's chief industries. Across the Grand River (R) is **JOHNSON'S PARK** (*picnic sites, playgrounds*), a large wooded tract with winding drives.

JENISON, 115 m. (175 pop.), is on the proposed canal route from Grand Rapids to Lake Michigan. Muck farmers in this vicinity strongly oppose the suggested waterway, contending that a canal would harm the soil by lowering the water table.

Jenison is in Ottawa County, a territory once very popular with the Indians. Throughout this district the Indians built houses, crude but spacious structures of wattle, and lived a comparatively settled life. One of the chief characteristics of the Ottawa was their friendliness toward the early New England pioneers, who had established farms here before the first Dutch arrived in 1847. This latter group of 47 colonists was the first of a long procession from the Netherlands. The ranks of American-born Dutch have been continuously swelled by immigration until now the Dutch number almost one-third of the county's total population. In manners, religion, food, industry, and recreation, the flavor of the homeland is kept alive.

ZEELAND, 128 m. (646 alt., 2,850 pop.), in the Black River Valley, was purchased in 1847 from the U. S. Government by Johannes Vander Luyster for \$114. It was named after the Netherlands province of Zeeland, whence Vander Luyster and a small colony of Dutch emigrated. Incorporated as a city in 1905, the place is the center

of the baby-chick industry in western Michigan. An Egg and Baby Chick Show is held annually in May. Industries include brick and furniture making, knitting, and the manufacture of casket ornaments.

HOLLAND, 133 *m.* (612 alt., 14,346 pop.) (*see Holland*).

Holland is at a junction with US 31 (*see Tour 15c*).

Tour 7

Port Sanilac—Saginaw—St. Louis—Howard City—Muskegon; 211 *m.*
State 46.

Roadbed graveled or hard-surfaced throughout.

Pere Marquette Ry. parallels route between Richville and Howard City.

Accommodations at short intervals.

Section a. PORT SANILAC to SAGINAW; 71 m.

Crossing the central section of the Thumb between Port Sanilac and Saginaw, State 46 marks a straight line through a rich sugar-beet-producing area. Communities along the route are, without exception, dependent upon agriculture or the raising of livestock. The route is rolling and in part wooded.

PORT SANILAC, 0 *m.* (620 alt., 147 pop.) (*see Tour 9a*), is at a junction with US 25 (*see Tour 9a*).

West of Port Sanilac the highway, known locally as the Rainbow Trail, enters a country of woods and streams. Irish immigrants settled this region, in the middle of the nineteenth century, and cleared their farm lands from dense stands of hardwood.

ST. MARY'S ROMAN CATHOLIC CHURCH (L), 3 *m.*, is one of the first places of worship in the Thumb. In the churchyard, with its many maples and Norway spruce, are the graves of many members of the early Irish congregation.

On the STOCK FARM (R), 11 *m.*, the Berry Brothers Estate raises purebred cattle, an occupation in which Sanilac County specializes. The county, in fact, leads the State in livestock production and includes among its herds many pedigreed Herefords, Holsteins, and other aristocrats.

SANDUSKY, 15 *m.* (774 alt., 1,305 pop.), seat of Sanilac County, is the center of this livestock belt of Michigan. The annual Sanilac Dairy Festival in August affirms the county's rank of second in dairy products. The two-day program includes a fair organized by the local

4-H Club and featuring butter and egg exhibits, the crowning of a dairy queen, a parade of prize beef and dairy cattle, and stock and dairy judging events.

At 28 *m.* is a junction with State 53 (*see Tour 10*).

KINGSTON, 33 *m.* (580 alt., 331 pop.), formerly Newburg, was settled in 1866 on the only dry land in an area known as Tag Alder Swamp. The swamp, which at one time could be reached only by ox or horse teams over roads of brush, slabs, and sawdust, has been drained and is covered with prosperous farms.

At 43 *m.* is a junction with State 85.

Right on State 85 is CARO, 6 *m.* (700 alt., 2,554 pop.), seat of Tuscola County and center of an area in which the principal cash crops are sugar beets, potatoes, and grain. A beet-sugar refinery operates here. In the basement of the TUSCOLA COUNTY COURTHOUSE, on North State St., is a collection of pioneer clothing and furniture, including some items 100 years old. At the landing on the staircase is a stained-glass window depicting General Cass, on the banks of the Cass River, signing the treaty with the Indians whereby they relinquished their title to this land.

The highway passes through rolling country covered with brush and bramble, pine and balsam. At intervals along the roadside, the State highway department has placed tables and benches beneath shade trees for picnickers. This lonely stretch of road spans only three small streams—Sucker, Pinniwick, and Houghton creeks. The soil is sandy or gravelly, and farms are few.

At 53 *m.* is a junction with a paved road.

Left on this road is VASSAR, 2 *m.* (595 alt., 1,816 pop.), on the Cass River, settled in 1849. The pioneers quickly exploited the cork pine forests of the vicinity and built fine homes on the crest of the hill. The village was named for Matthew Vassar, an uncle of one of the first settlers and founder of Vassar College at Poughkeepsie, New York. Although it has changed hands and names a number of times, the *Tuscola County Pioneer-Times*, a weekly newspaper with modern presses, has been in continuous existence since 1857.

RICHVILLE, 58 *m.* (300 pop.), is on level ground in the valley of the Cass River. Its very fertile soil yields fine crops of grain and vegetables. The RICHVILLE LUTHERAN CHURCH (R), 58.5 *m.*, is one of the characteristically German churches in this section.

SAGINAW, 71 *m.* (593 alt., 80,715 pop.) (*see Saginaw*).

Saginaw is at a junction with US 23 (*see Tour 11b*) and US 10 (*see Tour 5a*).

Section b. SAGINAW to MUSKEGON; 140 m.

West of SAGINAW, 0 *m.*, the course of State 46 leads through an agricultural area known as the Sugar Bowl of Michigan, a beet-growing and sugar-factory district of 50 square miles, one of the largest in the Midwest. West of the St. Louis area, cut-over timberlands are being reclaimed and transformed into a farm district; here, for many miles, jagged stump fences tell of the economies of early settlers. There is little of scenic interest along the highway except for one strip in the Manistee National Forest.

At 11 *m.* is a junction with State 47.

Left on State 47 is EASTWOOD, 5 *m.* (100 pop.), once a thriving coal-mining settlement. The Garfield mine is all that is left. The abandoned general store has fallen into decay.

ST. CHARLES, 8.5 *m.* (595 alt., 1,463 pop.), is on the Bad River, a waterway that carried millions of logs in the lumbering days. It was named for Charles Kimberly, a man of culture and refinement who, because he objected to obscene language, was derisively dubbed 'Saint' Charles.

At 12 *m.* is a junction with County 510; L. here to Alicia, 18 *m.* (250 pop.), site of the SUNRISE CO-OPERATIVE FARM (Prairie Farm), organized in 1933 by 75 families. It was developed on 9,000 acres of fertile soil reclaimed from swamp-land by an elaborate drainage system and high dikes. A large clubhouse, general store, and assembly hall are on one side of the farm; on the other are several large barns, cattle sheds, wagon and tool sheds, a huge elevator, and a mint distillery. When sections of this wide swamp area are submerged by the rise of the Flint River, levees keep the swirling waters within bounds. These dikes must be patrolled constantly for leaks and breaks, especially holes and tunnels made by burrowing woodchucks and muskrats. The farm, one of the largest east of the Mississippi, yields good crops of sugar beets, peppermint, and grains. Inner dissensions caused the farm's creditors to bring legal action, however, and it is now in the hands of the Farm Security Administration.

MERRILL, 21 *m.* (671 alt., 616 pop.), was named for a railroad engineer, who stood by with a locomotive during the forest fire of 1881, to carry the residents to safety. Merrill's main income derives from wheat, beans, and sugar beets. Excellent drinking water from flowing wells is sold in Saginaw. The fire engine of the volunteer fire department was designed and constructed by the villagers, who contributed their time, labor, and money.

ST. LOUIS, 35 *m.* (740 alt., 2,494 pop.), on the Pine River, is a small industrial city in Michigan's new oil and gas district. Settled in 1853, St. Louis, while still an unincorporated village, became known as a spa and health resort. The therapeutic quality of its water was discovered when an old drummer observed that washing his hands in the water relieved the rheumatism in his wrists. News of the cure spread, and those afflicted with rheumatism and similar ailments flocked into St. Louis or ordered shipments of water. The mineral baths are still popular. St. Louis has a chemical plant and a petroleum refinery, as well as a flour mill, a creamery, and a beet-sugar factory.

St. Louis is at a junction with US 27 (*see Tour 12b*), which unites with State 46 for four miles (*see Tour 12b*).

At 46.5 *m.* is a junction with County 555.

Right on this road to the LUMBERJACKS' AND RIVERMEN'S PARK (*camping free; donations customary*), 1 *m.* (R), reached along the graveled road following Pine River. The Lumberjacks' and River-drivers' Association, composed of old time woodsmen, owns the tract and holds reunions here each year. A realistic cataract has been constructed. In the deep shade, among towering pines—the only virgin timber in Gratiot County—are a few recreational buildings and a dining hall, where souvenirs of lumbering days are on display.

EDMORE, 57 *m.* (964 alt., 897 pop.), was named for Edwin Moore, who platted the village in 1878. Like so many villages in this region,

an exciting past in the boom days of lumbering is of more interest than the contemporary scene. Edmore is reputed to have had 12 saloons and 4 hotels. Today its economy is based upon dairying and milling and the recently discovered gas and oil.

SIX LAKES, 63.5 *m.* (150 pop.), during the summer provides opportunities for fishing in numerous small lakes. Shortly after 1875, Six Lakes was chosen as the site of a railway depot, whereupon the residents of near-by Summerville deserted their village and moved in. Development of gas and oil wells has put Six Lakes in a position to regain the prosperity it lost with the decline of lumbering.

At 78.5 *m.* is a junction with US 131 (*see Tour 14a*), which unites with State 46 to HOWARD CITY, 82 *m.* (870 alt., 872 pop.) (*see Tour 14a*).

At 92 *m.* is a junction with County 633.

Right on this road is CROTON, 25 *m.* (150 pop.), site of the CROTON DAM (L) on the Muskegon River. The Muskegon, winding between towering banks from Houghton Lake to Lake Michigan, is one of the longest rivers in the State, with a swift current that affords good canoeing. Because this region has a glacial drift several hundred feet deep, engineers found it impossible to anchor the dam to bedrock. Three thousand oak logs were driven far below the river bed, matted together with interlocking sheet-steel piling, and covered with concrete to provide the foundation for the dam.

The HARDY DAM, 83 *m.*, of earthwork, is 3,000 feet long, 1,000 feet wide, and 120 feet high. The 16-mile lake formed above the dam is open to the public for recreational purposes. The road follows a driveway across the dam, presenting on one side a sweeping view of the broad backwater, almost level with the roadbed, and on the other the wooded, steep-banked ravine with the rushing Muskegon at its bottom.

At 11.2 *m.* is the junction with an earth road; L. here to the BIG PRAIRIE, 12.2 *m.*, a sandy waste of several square miles that was once forest and later farm lands. The shifting sand dunes have blotted out trees, houses, and fields with a completeness equalled only in the 'dust bowl' of the Plains States. Several fences to confine the sands have been buried under successive layers; efforts are being made through reforestation to prevent the spread of the sands. In a small cemetery at the western edge of the desert are tombstones with dates from the 1850's.

A HIGH ROLLWAY (R), 96.5 *m.*, is a steep sandy slope that rises 250 feet above the Muskegon River. In lumbering days, logs piled upon the crests of such slopes during the winter months were released in the spring and allowed to thunder down in the annual spring drive. The view here, one of the most far-reaching along the Muskegon, includes wide stretches of cut-over lands threaded by the winding river.

NEWAYGO, 101.5 *m.* (665 alt., 1,227 pop.), settled in 1836 and incorporated as a village in 1867, is set deep in the valley of the Muskegon River. A screw factory and a furniture supply factory are in operation.

It is said that the name 'Newaygo' is an Indian word meaning 'much water,' but another story ascribes its origin to an English phrase garbled by the Indians. According to this story, traders came to the Indian village two miles below Newaygo and sold some dishpans to the women, who hung them about their necks as ornaments. Finally, tiring of the

cumbersome gewgaws, they stored them away. One day the braves and squaws were enjoying their favorite winter sport of sliding down the steep bluffs on boards. One elderly woman brought out her dishpan, sat upon it, and slid down the bluff, outdistancing the braves. Having at last discovered a use for the pans, every Indian who could find one was soon 'dishpanning' down the slope. As they raced, they shouted in broken English the phrase that later became the name of this peculiar sport and in time the Indian word 'Newaygo.'

In the days of the horse and wagon the hills of Newaygo were notorious for the number of loaded wagons and sleighs that piled up on the road descending to the village. The hilly country north of the village, a region of lakes and streams, is often called the 'Little Switzerland of Michigan.' Deer are plentiful and are often seen along the road west of Newaygo, where the State has posted signs to warn motorists to use care in driving after dark.

At 109 *m.* is a junction with a graveled road.

Right on this road to ASHLAND COLLEGE (L), 0.1 *m.*, one of the few remaining folk schools in the United States. The college has accommodations for about 25 students and operates with no examinations, no credits, no lesson assignments, no degrees, no required attendance at classes, and no entrance requirements other than that the student be more than 18 years of age. The emphasis is placed on subjects dealing with everyday life. There is no set course of study; the broad pattern of the school includes training in recreation, folk songs and dances, games, and almost any other course that will assist adults to enjoy living. A ten-weeks summer session, composed of a series of one-week schools, accommodates vacationists; there is also a ten-weeks winter course beginning in January. The school was established in 1880 by Danish settlers to teach English to new immigrants and help them adjust themselves to life in this country.

Westward the highway crosses a region that produces onions, peppermint, and celery. Apple and peach orchards increase in number as the route approaches Lake Michigan.

MUSKEGON, 140 *m.* (625 alt., 41,390 pop.) (*see Muskegon*).

Muskegon is at a junction with US 31 (*see Tour 15b*).

Tour 8

Marysville—Marine City—New Baltimore—Junction with US 25; 43 *m.* State 29.

Roadbed hard-surfaced throughout; ferry service to Canada at Marysville, St. Clair, Marine City, Roberts Landing, and Algonac. Numerous resort and tourist accommodations.

South of Marysville, State 29 follows the shore of the St. Clair River and swings west at the St. Clair Flats around Anchor Bay. This route affords a constant view of the river, with its steady stream of heavily laden freighters. The level of the Great Lakes rises and falls according to a well-established cycle, and in recent years the water has been less than two feet deep at the end of many of the long piers jutting into the river. Nevertheless, heavily laden ore carriers, following a dredged channel, pass within a stone's throw of the piers.

Formerly a mere trail, the first section of the highway now named State 29 was authorized by St. Clair County commissioners in 1821. The first link connected the mouth of Belle River and the mouth of Pine River, but other sections were later opened farther south to facilitate travel to the village of St. Clair, at that time the county seat.

During the prohibition era, many of the villages and waterfront resorts were notorious as smuggling centers, through which vast quantities of liquor illegally entered the country from Canada. The contraband cargoes were carried aboard motorboats and dories that cleared Canadian ports under the declaration that they were bound for Cuba, Mexico, or even more distant countries. In winter the supplies were brought across on sleds. Gun battles and wild chases in which Government agents, hijackers, and smugglers participated were almost nightly occurrences. This illegal traffic brought wealth to the river front and fortune to many individuals, but it also flooded the district with ruffians. Some of the most hunted bank robbers of the Middle West found refuge in places along the river that were controlled by the smuggling fraternity; several of them occupied imposing summer homes and represented themselves as wealthy sportsmen. Now these communities are among the quietest in the State. Their permanent populations include many lake sailors and their families; during the summer months, thousands of tourists and resorters visit them.

State 29 branches south from its junction with US 25, 0 m. (see *Tour 9b*), in the northern part of Marysville.

MARYSVILLE, 1 m. (589 alt., 1,405 pop.), near the St. Clair River, is one of the oldest settlements in the State. The regional white pine—strong, light, and easy to work—was in great demand in the rapidly growing village of Detroit. As early as 1780 a sawmill was in operation here, and, following the fire of 1805 that almost destroyed Detroit, four more sawmills were erected to supply the increased demand for lumber. When in 1920 word was received that the Wills-St. Clair Company was to open an automobile plant at Marysville, the citizens were so jubilant over the prospect of exchanging a village for a metropolis that they went so far as to subdivide hayfields and lay out broad boulevards. The company did operate here for a brief period, but no such grandiose development resulted as the residents had anticipated.

Salt beds buried deep beneath Marysville provide raw material for the MORTON SALT WORKS (L). The MARYSVILLE PARTS PLANT (R) of the Chrysler Corporation (*open by permission*) was purchased in

1935 from the discontinued Wills-St. Clair Company. The plant, which occupies a 134-acre site, manufactures service parts.

The GAR WOOD BOAT WORKS (*open by permission*), 2 m., a division of Gar Wood Industries, was erected in 1930 for the construction of Gar Wood boats. Two hundred employees turn out 98 types of custom runabouts and utility boats on a production line similar in plan to those in automobile plants.

Garfield Arthur Wood, famous as the world's speedboat-racing champion, was the inventor of the hydraulic hoist that revolutionized the process and speed of dumping loads from trucks. Income from manufacture of the hydraulic hoist, patented in 1915 and first used on Pierce Arrow trucks and by the Packard Motor Car Company, permitted Wood to engage in his hobby of speedboat racing. Entering his first major national championship race in 1917, Gar Wood became nationally famous in 1920 when he piloted the *Miss America I* on the Osborne Bay course in England, to bring back to the United States the British International (Harmsworth) Trophy. Since that year, Wood has defended and won the Harmsworth Trophy nine times with various *Miss America* models, winning the last race on the St. Clair River in 1933 with *Miss America X*.

ST. CLAIR, 7 m. (604 alt., 3,389 pop.), was laid out in 1818, and the first lots were offered for sale the following year. The first post office in St. Clair County was established here in 1826, and two years later the growing village was replatted by Thomas Palmer. Although there are many conflicting stories concerning the origin of the name, the one generally accepted is that La Salle, on his first trip up the lakes in the *Grifon*, entered the lake August 12, 1679, the feast day of Sainte Claire. So impressed was he by the beauty of the lake, he bestowed upon it the name of the saint, which was later applied to the river and to the village.

In 1763, the British officer Patrick Sinclair—for whom some assert the village was named—was placed in command of transportation of supplies from Detroit to Michilimackinac. In this capacity, Sinclair obtained from the Indians a large tract of land along the Pine River, in the center of the present city. Here he erected Fort Sinclair as a Government post and depot on the supply route. The fort, probably built in 1765, was abandoned 20 years later. Nothing is known of its form or size beyond the fact that it contained at least one brick building, some portions of which were still standing in 1830. From a lumbering village, St. Clair gradually developed into an agricultural community and was incorporated as a city in 1858. Among its residents it numbers many retired lake captains, whose houses are reminiscent of New England.

Enormous salt deposits lie beneath St. Clair, and the DIAMOND CRYSTAL SALT PLANT AND WELLS (L), 8 m., is the city's principal enterprise.

MARINE CITY, 15 m. (585 alt., 3,462 pop.), which once had many lumber mills, is the only city along the St. Clair River that does

not have at least one nationally known industry. In Marine City, as in other communities along this route, the chief interest is the river, where in endless procession the freighters go by, bearing to the Nation's markets the wealth of the Great Lakes area in raw materials and manufactured products. Here is the grain of the sunbathed fields, the copper of Keweenaw, the iron of Mesabi; and coal, and cars, and salt, and oil, and steel. Among the freighters, pleasure craft ply their way—excursion steamers gay with flags, catboats, and sleek-flanked yachts. The river channel is close inshore; the sailors and the people on land often exchange gossip and banter. The banks are lined with all kinds of houses—workers' homes, summer cottages, and retired captains' mansions.

The narrow tongue of land within the city, created by the parallel courses of the Belle and St. Clair Rivers just north of their confluence, is known as CATHOLIC POINT, one of the earliest designations on Michigan county maps. This land was purchased in June 1824, by Father Gabriel Richard for the Roman Catholic Church. The present HOLY CROSS ROMAN CATHOLIC CHURCH, 628 S. Water St., a Gothic structure of stone built in 1903, replaced two earlier buildings, one of frame, the other of brick, which had been erected on the site. The dates of these churches are unknown, as the earliest records begin in 1855, when St. Felicité, as the mission was then called, received its first resident priest.

ROBERTS LANDING, 19 *m.* (50 pop.), is a community of half a dozen homes named for the first settler, a man who came here in 1830. Members of the third generation of the Roberts family still live here. It is a stopping place for fishermen and hunters.

ALGONAC (Ind., land of the Algonquin), 23 *m.* (585 alt., 1,736 pop.), for more than a century has been a shipbuilding center. The CHRIS CRAFT PLANT (*apply at office*), near the southern limits, belongs to the company that has produced a long line of winning *Miss Americas*, including *Miss America X*, which in 1932 Gar Wood piloted to a world's record of 124.915 miles per hour average for two one-mile runs on the St. Clair River. This record was bettered in 1937 by Sir Malcolm Campbell, who piloted his *Bluebird* to a new world record of more than 130 miles per hour.

WALPOLE ISLAND (*ferry from Algonac every half hour, 6:30 A.M. to 11:00 P.M.; 50¢ for automobiles, 10¢ for passengers; guides on island*) appears to be part of the Canadian mainland but is actually a large tract separated from Ontario by Chenal Escarta, a side channel that flows from the St. Clair east of Algonac into Lake St. Clair. The island is a Canadian reservation on which about 800 Chippewa and Potawatomi live. Elementary education and a knowledge of modern farming methods have not completely altered their hereditary mode of life. They make baskets, pottery, beadwork, and other characteristic wares, which are sold at Tashmoo Park (*see below*). They also breed a large number of ponies.

South and west of Algonac, where the river enters the calm waters

of Lake St. Clair, is the delta—generally known as the Flats—created by sediment washed down from the upper lakes. The Flats are reached by a ferry operating between Algonac and Harsen's Island every 15 minutes (*round-trip, 75¢ for car and passengers, including tickets to Tashmoo Park. Inter-island and inter-resort water-taxi service at Clay's Store, at the southern tip of Harsen's Island.*)

ST. CLAIR FLATS, a popular resort for many years, is made up of a group of islands forming a delta with a maximum width of about nine miles, varying with the rise and fall of the Great Lakes waters. Of the several islands, the largest is Canadian-owned Walpole Island; the largest of the American group is HARSEN'S ISLAND, on the south shore of which is TASHMOO PARK (*small fee*), an amusement place and athletic field. Although Harsen's Island has 18 miles of highway, many of its residents prefer to use its network of channels and canals, garaging their automobiles on the mainland. The estimated winter population of the island is 500, although in summer this is increased to 5,000 as residents of metropolitan Detroit flock to their summer homes on the Flats. DICKINSON ISLAND, in the same group, has a winter population of 25, mostly caretakers, and a summer population of 500. Whether expensively or plainly constructed, all of the summer homes on the islands are set along the narrow canals and are decorated with gay awnings and surrounded by well-kept gardens.

In 1907, the Supreme Court of the United States ruled that the St. Clair Flats were a part of the bottom of the Great Lakes when Michigan was admitted to the Union in 1837, and as such they were the property of the State to be forever held in trust for the people of Michigan. Because of the popularity of the Flats as a summer recreational area, the legislature in 1913 provided for the leasing of the land for resort purposes. The Flats are now leased under the administration of the lands division of the State department of conservation.

Three miles from Algonac, on the southern shore of Harsen's Island, is SANS SOUCI (250 pop.), which has the only post office in the group. The MID-CHANNEL GOLF AND COUNTRY CLUB (*open to public; picnicking permitted*), on the west side of Harsen's Island, along the Middle Channel, has an 18-hole course. Fishing in the Middle Channel is very popular. Depths down to 20 feet and stream velocities up to 6 miles an hour account for the variety of fishes and fishing methods. From earliest record the Flats have been a stopping place for wild fowl on their spring and autumn flights, and to this day they are among the finest hunting grounds in Michigan for ducks.

PEARL BEACH, 27.5 m. (200 pop.), is on the north side of the North Channel. The village is almost surrounded by an area, often covered by a few inches of water, where nothing grows but a coarse-bladed grass. This section long ago attracted the French, who were more interested in fishing and hunting than in clearing land and farming, and the village is still a meeting place for duck hunters. In 1796,

when the first private claims were listed, 12 families lived in this vicinity.

THE COLONY GOLF CLUB (*open to public*), 29.5 m. (R), an 18-hole course, is surrounded by a low dike.

FAIR HAVEN, 33 m. (800 pop.), one of a chain of communities on the North Channel and along the shore of Anchor Bay, was formerly a timber-mill village and was at one time included in the Swan Creek Indian Reservation. Today, it is a rural shopping center for the farmers of the township, who are mostly of French descent. Many Detroiters have their summer homes here. Anchor Bay, an arm of the St. Clair River well protected from wind, is a popular place for fishing and skating. Winter fishing is a major sport. When the ice is thick enough, automobiles haul hundreds of shacks far off shore; a veritable city, including a restaurant, springs up on the ice each winter.

ANCHORVILLE, 35 m. (350 pop.), on the northernmost lobe of Anchor Bay, is another former French lumbering community that has come to depend on tourist traffic for income. Along the bay shore are many summer residences.

NEW BALTIMORE, 38 m. (579 alt., 1,148 pop.), once a small lumbering center with a sawmill and dock on Anchor Bay, is now a year-round resort. During the summer there is fishing for perch, bass, pike, and muskellunge in the bay and in Lake St. Clair. Fall heralds the duck hunting season; and in winter there is fishing through the ice. Along the shore, where the water is two to four feet deep, are perch, pickerel, and other small species; muskellunge, weighing from 18 to 34 pounds, are found two or three miles from shore. The smaller fish require little skill to hook, but the muskies provide real sport. An experienced fisherman, wetting his lines daily, may land four or five legal-size muskellunge in a season. The average is about two. Despite heavy winter fishing, there has been no scarcity of fish in Lake St. Clair in spring and summer. However, since 1921, the sea lamprey, which fastens itself to its victims and drains them of their blood, is known to have invaded these waters. Because it breeds so fast, the United States Bureau of Fisheries fear that it may eventually destroy the game fish in this area, and authorities are making a study of the problem.

THE CIVIC DAHLIA GARDENS, a small plot at Green and Taylor Sts., and a ten-acre tract at Green and Main Sts., are the beginnings of a movement, initiated in 1938, to beautify New Baltimore. About 100,000 dahlia plants and 35,000 gladiolus bulbs are grown in the large tract.

State 29 ends at the junction with US 25, 43 m. (*see Tour 9b*), six miles north of Mt. Clemens (*see Tour 9b*).

Tour 9

Bay City—Port Austin—Port Huron—Detroit—(Toledo, Ohio); State 25 and US 25.

Bay City to Ohio Line, 267 *m.*

Roadbed hard-surfaced between Bay City and Port Huron, except for graveled stretches between Port Austin and Port Sanilac; between Port Huron and the Ohio Line roadbed is hard-surfaced, three-four lanes.

Pere Marquette Ry. parallels route between Unionville and Bay Port, between Port Austin and Grindstone City, between Port Hope and Harbor Beach, and between Monroe and Toledo; Grand Trunk Ry. between Port Huron and Detroit.

Accommodations at short intervals.

Section a. BAY CITY to PORT HURON; 158.5 m. State 25, US 25.

State 25, becoming US 25 at Port Austin, follows the wind-swept shore of Lake Huron, outlining, as it progresses from one small resort to the next, the section of the State popularly known as the Thumb.

BAY CITY, 0 *m.* (604 alt., 47,355 pop.) (*see Bay City*).

Bay City is at a junction with US 23 (*see Tour 11a*).

At 2.5 *m.* is a junction with a paved road.

Left on this road is ESSEXVILLE, 1.5 *m.* (592 alt., 1,880 pop.), where one of the first beet-sugar refineries in the State was formerly operated. Today, the city's principal industries are the manufacture of cement and commercial fishing. Fishing companies engage in deep-water operations in Saginaw Bay and the Lakes. North of the Saginaw River, which borders the city, is the lighthouse. Near the lighthouse is the BAY CITY YACHT CLUB (*private*).

QUANICASSEE (Ind., lone tree; pron. Kewan-a-ka-see), 11.5 *m.* (25 pop.), is a small settlement on Saginaw Bay near the mouth of the Quianicassee River. Quianicassee at one time was at the end of an important Indian trail that followed the shore of Saginaw Bay to the edge of an impassable swamp, an ideal hunting and fishing ground. The country surrounding Quianicassee is a prairie, low and level. Almost no farming was carried on until recent years, when the dredging of a system of canals transformed the swampy district into farm lands particularly suited to the growing of sugar beets.

The highway proceeds inland from the lake to WISNER, 16 *m.* (50 pop.), a trading village in the center of a good farming district.

Left from Wisner on County 417 to BAY PARK (*camping*), 2.5 *m.*, a summer resort and point of departure for hundreds of winter sportsmen who fish through the ice on Saginaw Bay.

UNIONVILLE, 23 m. (620 alt., 478 pop.), with a predominantly German population, lies in a sugar-beet producing area. Many of the men are employed at a near-by coal mine. The MORAVIAN CHURCH, on Cass Avenue, is one of the last remaining organizations of this Bohemian sect in the Lower Peninsula.

SEBEWAING (Ind., by the creek; pron. Se-be-wing), 29 m. (590 alt., 1,441 pop.), is at the mouth of the Sebewaing River. Large, oddly shaped rocks along the bay add interest to the view. Among industrial plants is a BEET SUGAR REFINERY (*open by permission*), Maple and N. Center Sts., a brewery, and a plant that manufactures fish-net anchors. Commercial fishing is an important enterprise. Vineyards near by produce some of the finest grapes in the State. SEBEWAING CITY PARK (*free; camping and kitchen facilities*), south of Main Street, is popular with fishermen and duck hunters.

THE PLAYHOUSE (*open by permission*), the second house east of the bridge, is a completely furnished and equipped miniature house built by Mrs. Gust Morotske for her daughter. The charming little house was made of salvaged wood and crates at a total cost of \$150. Mrs. Morotske's tools were a hammer, a saw, a jackknife, and sandpaper. Paths and walks, decorated with Mother Goose rhymes, lead around the building to a garden in the rear, where child-size furniture is placed beneath the trees.

BAY PORT, 41 m. (537 pop.), on Wild Fowl Bay, is notable chiefly for its scenic surroundings. Dense growths of pine attracted early settlers and made lumbering one of the two chief industries for a score of years. Fishing, the other early industry, is still of importance, for Bay Port possesses one of the largest commercial fishing fleets on the Great Lakes.

On HEISTERMAN ISLAND, 2.5 miles off shore, a University of Michigan archaeological expedition discovered in 1938 an Ottawa village believed to have lain undisturbed for more than a century. Clues leading to this discovery were found in Indian settlement records in the possession of the University.

Between Bay Port and Port Huron the route runs close to the water, although stretches of dense forest growth often shut off the view of the lake.

At 41.5 m., is a junction with a macadam road.

Right (*straight ahead*) on this road to a junction with a crushed stone road, 1.5 m.; R. here to a junction with a graveled road, 2.5 m.; L. here to the WALLACE STONE COMPANY QUARRY (L), 3 m., established in 1883, which produces a hard dolomite known as Bay Port stone. Used as a material in mixing concrete for highway construction and for fluxing in iron manufacture, Bay Port stone also is perfectly adapted for rock-faced masonry and has been used in its natural slab form in the construction of several public buildings in the Thumb and in Saginaw Valley. The quarry has been worked to a depth of 14 feet, although the beds are known to be at least 42 feet deep.

A small clearing in the woods, 43.5 m. (R), is the SITE OF THE SOCIALIST COMMUNITY OF ORA ET LABORA. Here, in 1847, a colony of

288 Germans from Pennsylvania attempted to establish a religious and socialistic Utopia on 3,000 acres of land, basing their program upon 'pray and work.' The colony was dissolved shortly after the Civil War, for which many of the young men were drafted, and today there is nothing left to mark the site except a few fruit trees, grapevines, and faint depressions in the sandy earth where the colonists' homes once stood. Many children and grandchildren of the original colonists still live in the Thumb.

CASEVILLE, 50 *m.* (700 alt., 412 pop.), at the mouth of the Pigeon River on Saginaw Bay, commands a sweeping view of sand beaches and blue waters. A terminal for lake and rail shipping, it once was an industrial center, with a prosperous salt well and iron works. The commercial enterprises and the buildings that housed them have disappeared, and Caseville today is a tourist village. On the bay shore is the CASEVILLE COUNTY PARK (*bathing and camping facilities*).

Between Caseville and Port Austin, State 25 is known as the New Scenic Shore Road. Along it is HURON STATE PARK, 54.5 *m.*, 245 acres on Lake Huron, which offers campers a wide range of facilities, from smooth beaches of white sand and a bathhouse with running water to electricity generated by its own plant. OAK BEACH PARK (*camping facilities; good beach*), 59 *m.*, is a 50-acre county park.

PORT AUSTIN, 68.5 *m.* (600 alt., 503 pop.), a resort village on Lake Huron, was first visited in 1837 by a fugitive of the Canadian Patriotic War, who found an excellent hiding place in a cove on this stretch of shore. Others followed and took up land in the hideaway, making the place a permanent settlement. Within the village is the small, well-kept PORT AUSTIN COUNTY PARK (L), from which the unusual geological formations, TWIN ROCKS, are visible.

Port Austin is at a junction with State 53 (*see Tour 10*). In Port Austin State 25 becomes US 25.

At 71.5 *m.* is a junction with an earth road.

Left on this road, at the tip of the Thumb, is POINTE AUX BARQUES, 15 *m.* (12 winter pop.), a resort settlement. The surrounding estates are owned by wealthy Detroit families. It is believed that the Pointe is named for the large rocks off shore, which resemble the prows of ships. Among these are TURNIP ROCK, NATURAL BRIDGE, and THUMBNAIL ROCK. Because of the rough shore line, the Government maintains a lighthouse and Coast Guard station here.

At 74 *m.* is a junction with a side road, east of the Grindstone City School.

Left on this road is GRINDSTONE CITY, 05 *m.* (100 pop.). For 100 years the village produced some of the finest abrasive stones in the industry, exporting them to England and to other foreign markets. Two factories operated until the first World War, when the development of carborundum made the quarrying of grindstones unprofitable. Today the old docks and many of the old stores, houses, mills, and office buildings are going to ruin. In the abandoned quarries layers of stone are still plainly visible above the water and weeds.

In HURON CITY, 77 *m.* (30 pop.), once a large lumbering center, is the summer home and private golf course of William Lyon Phelps,

Yale professor emeritus, who preaches from the 'Visible Church in the Invisible Town' every Sunday during the summer.

PORT HOPE, 86 *m.* (600 alt., 298 pop.), according to stories, was named in 1855 by sailors who succeeded in reaching this point after their ship had been wrecked on the rocks off shore. Summer homes make up most of the village. A lighthouse in Port Hope offers a view of the lake shore, which at this point is rocky and rugged.

HARBOR BEACH, 94 *m.* (582 alt., 1,892 pop.), a resort and Great Lakes fishing center, was the site of one of Michigan's first illegal money factories. In the era of wildcat money in the State, counterfeit United States currency and Mexican dollars were made here and distributed in large quantities. Local citizens, aware of the illicit nature of the business, made no public complaint. The stabilization of State currency eventually forced the counterfeiters to close shop. Today, the city produces and ships wheat and cornstarch, corn oil, food paste, and feed for cattle. Five fishing concerns annually catch and ship more than 750,000 pounds of fish. Tourist accommodations include a free municipal camp and a community house. Harbor Beach was the birthplace of the Honorable Frank Murphy of the U. S. Supreme Court.

In Lake Huron, not far from the highway at 103.5 *m.*, a WHITE ROCK marks the northern line of the territory ceded by the Indians to the United States under the treaty signed at Detroit, November 17, 1807. The treaty was negotiated between General William Hull, then governor of Michigan Territory, and the Chippewa, Ottawa, Wyandot, and Potawatomi tribes. The United States gained jurisdiction over this territory by purchase of the lands defined by the present international boundary, the present Ohio State Line, and a line due north from the mouth of the Au Glaize River in Ohio to a point opposite the outlet of Lake Huron, and thence northeast in a direct line to the white rock. The rock has been greatly reduced in size by erosion.

WHITE ROCK, 104 *m.* (50 pop.), is Michigan's most renowned 'phantom city.' In 1835-6, the era of great land speculation, elaborate topographic maps, displayed in Detroit hotels and barrooms, depicted White Rock as a prosperous city, with a courthouse, bank, and other public buildings overlooking a magnificent lake harbor. Auctioneers proclaimed the village 'the future metropolis of Michigan' and sold lots singly and in blocks. When buyers eventually visited the district, they found only the shacks of a few timber cutters, located with no regard for the plats and titles of the 'phantom city' planners.

FORESTVILLE, 107.5 *m.* (730 alt., 125 pop.), its surrounding hills and gorges leveling off to the Huron shore, resembles a small New England seaport. Settled in 1835, the village was destroyed by a forest fire in 1881, which also leveled RICHMONDVILLE, 114 *m.* (20 pop.).

Thirty-acre SANILAC COUNTY PARK (*bathhouses, camping facilities*), 118.5 *m.* (L), was established by the village of FORESTER, 119.5 *m.* (60 pop.), formerly a thriving lake port with many lumber mills. About 1871, a development firm, Smith, Tanner and Company, operating in this district, obtained interests in everything from lumber and ship-

ping to hotels and real estate; because of its business methods the firm was dubbed 'Ketchem, Skinem and Tannem.' To a member of the company, 'Four Eye' Smith, is attributed the introduction of quack grass, a noxious weed that has spread everywhere, interfering with the growth of native grasses.

The great fire of 1881 laid waste much of the valuable timber stands in the county. The village itself was not destroyed, but so intense was the heat that settlers, with their cattle and other domestic animals, sought refuge in Lake Huron. Prior to the fire, docks were built for both freight and passenger transport, and packets of all the lake lines made this a port of call. Years later, when lumbering was negligible and the railroad had come in, the shipping business collapsed, and by 1910 ships no longer docked here.

PORT SANILAC, 124.5 *m.* (620 alt., 147 pop.), was called Bark Shanty Point by the first settlers in 1844, who found upon the site a shack that had been occupied four years earlier by a group of Detroit tanners who had come here to manufacture tanbark. During the middle nineteenth century, the community was known throughout the Thumb for the *Bark Shanty Times*, the only daily newspaper in Michigan without reporters or an editorial staff, printers, presses, deadlines, or wire services. Despite these handicaps, the *Times* came out daily with all the news of the locality, reaching its greatest popularity in 1856. The manner of publication was original: the editor, who was postmaster and storekeeper, placed on his counter large sheets of newsprint paper and a supply of lead pencils. Customers and visitors were urged to write any news they had, or to contribute stories and editorials. There were no editorial taboos; contributors wrote what they pleased. When one day's edition had been thoroughly read, the sheets were bound in volumes and filed. Many local citizens and traveling salesmen were regular contributors. During the presidential campaign of Douglas and Buchanan, one 'editorial' questioned: 'Who ever heard of such a place as Kansus! They say the Damakrats has split and one Buckannon has carried part of 'em off, clean up salt river; and Mr. Duglis has got together part of 'em and is goin' to make squatters of 'um.' Another local scribe rose in defense of Bark Shanty as a name: 'Quis [a visitor] says our place has a lop-eared name; the first part, he thinks has affinity with the canine race, or close affinity to the rine of a certain tree. The latter, he thinks, is significant and analagous to the place. But,' he continued, 'I don't respect his judgment altho the muse has said good name is a good thing, which we admit we think ours is a good one.' A descendant of the editor today owns the cancellation stamp of old Bark Shanty post office and, each year, stamps about a hundred envelopes at the request of visitors.

Port Sanilac is at a junction with State 46 (*see Tour 7a*).

LEXINGTON, 136 *m.* (613 alt., 380 pop.), differs little from hundreds of other resort villages along the Huron shore line. In addition to the usual general store, post office, and drugstore, it has three fisheries and a lumber company. In late May and early June, the blos-

soming of a cherry orchard at the north end of the village is a sight eagerly awaited by Lexington residents and early summer visitors.

The GRACE BENTLEY CAMP (L), 145 m., a vacation place for crippled children, is owned and operated by the Michigan League for Crippled Children.

In ST. CLAIR STATE PARK (L), 145.5 m., 17 acres of woodland overlooking the lake have been improved for the accommodation of tourists. The WOMAN'S BENEFIT ASSOCIATION CAMP, 148 m., is a retreat for mothers and children on a wooded site along Lake Huron's shores.

PORT HURON, 158.5 m. (599 alt., 31,361 pop.) (*see Port Huron*). Port Huron is at a junction with State 21 (*see Tour 6a*).

Section b. PORT HURON to DETROIT; 57.5 m. US 25.

In PORT HURON, 0 m., the route swings away from the Lake Huron shore and continues to Detroit through an inland agricultural area. A highway survey in 1936 tabulated between 15,000 and 20,000 cars daily along this stretch during the warm months of the year.

At 4 m. is the northern junction with State 29 (*see Tour 8*).

RATTLE RUN, 12 m. (15 pop.), a country four corners for the past century, was named for a little stream east of the village; on quiet nights the water pouring over the rocks makes a rattling sound.

MUTTONVILLE, 21 m. (75 pop.), was so named because sheep were brought here and slaughtered for the Detroit market. It is now a trading center surrounded by farms.

Right from Muttonville on State 19 is RICHMOND, 2 m. (654 alt., 1,493 pop.), settled first as Beebe's Corners. Soon a settlement called Ridgeway, later Lenox, was started on the Grand Trunk Railway, a mile east. A business district, half-way between, eventually merged the settlements into one village, incorporated in 1879. At SPORTSMAN'S PARK, in the northeastern section of Richmond, is a half-mile dirt track where, for the past 60 years, harness races have been held each May 31 and July 4. About 30 Michigan horses are entered in the events.

At 30.5 m. is the southern junction with State 29 (*see Tour 8*). At 35.5 m. is a junction with Henry B Joy Road.

Left on this road to SELFRIDGE FIELD (*open 8-4 daily; autos may drive onto field; escorts furnished*), 2.5 m., one of the U. S. Army's most important air bases, occupying about 650 acres. Built at the time the United States entered the first World War, Selfridge Field is the home of the First Pursuit Group of the U. S. Air Corps, and is also base headquarters of the Third Air Base Squadron. A \$3,000,000 construction program was completed in 1934, and further improvements have been made under WPA grants. Modern barracks accommodate the 1,000 enlisted men. The steel and stone hangers and concrete runways are utilized by the 100 pursuit, bombing, and combat planes usually kept here. The field is equipped with a hospital, a motion-picture theater, a post office, and several auditoriums and clubs. Flying activities are daily events. Each fall the U. S. Army's Mitchell Trophy Air Race, including the Curtiss-Wright and the Junior Birdmen races, is held here.

MOUNT CLEMENS, 36.5 *m.* (615 alt., 13,497 pop.), on a natural ridge overlooking the Clinton River, is Michigan's spa, a city of bath-houses and hotels, with a strong, all-pervading, sulphurous odor. The medicinal properties of the water attract people from far and near, and on this transient population depends the prosperity of the city. The water, pumped from a depth of approximately 2,600 feet, contains about 30 different chemical elements. Large quantities are shipped throughout the country for medicinal purposes. Zoning laws have limited the development of industry to a few small factories on the outskirts of the city.

The GRAND TRUNK STATION, at Cass Avenue, is the building in which Thomas Edison learned telegraphy. At the river in the southwestern part of the city is the SITE OF NEW GNADENHUTTEN, a village founded by persecuted Moravians in 1781 and abandoned in 1786. The Clinton-Kalamazoo Canal was begun at this point on the Clinton River in 1837-8. While work on the Utica link was still in the preliminary stage, the village of FREDERICK, a prospective freight terminal, was established near the old location of New Gnadenhutzen. In the belief that the place would eventually become an important port and metropolitan center, citizens invested in lands, buildings, and improvements. When the canal project failed, the new village gradually disappeared. Beginning at this point is the MORAVIAN DRIVE, which follows an old Indian trail toward the southwest. The country through which the drive passes is known for its greenhouses, and particularly for its production of roses.

ROSEVILLE, 43.5 *m.* (619 alt., 6,836 pop.), a suburb, had its beginning in the industrial expansion of Detroit in 1918. The sprawling countryside has become the site of a substantial community that provides homes for many people employed in the metropolitan area.

EAST DETROIT, 46.5 *m.* (590 alt., 5,955 pop.), formerly known as Halfway because of its situation midway between Detroit and Mount Clemens, is the first city north of Detroit on Gratiot Avenue. Removed from the smoke and noise of its neighbor, it is an attractive commuters' suburb.

At 47.5 *m.* is a junction with Eight Mile Road (Base Line Highway), which leads L. to the Grosse Pointe section of metropolitan Detroit (*see Tour 9A*).

DETROIT, 57.5 *m.* (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 12 (*see Tour 2a*), US 16 (*see Tour 4a*), US 10 (*see Tour 5a*), and State 53 (*see Tour 10*).

Section c. DETROIT to the OHIO LINE; 51 m. US 25.

Southwest of DETROIT, 0 *m.*, the highway follows a direct course to the Ohio Line, passing through only one city of size, Monroe, on the way to Toledo. Between Detroit and Flat Rock are several resi-

dential districts that form a part of the Greater Detroit area; south of Flat Rock the land is devoted chiefly to agriculture.

South of the city limits, the highway skirts the residential suburbs of MELVINDALE, 7 *m.* (582 alt., 4,035 pop.), and LINCOLN PARK, 8.5 *m.* (597 alt., 12,336 pop.), most of whose residents work in the Ford Motor Company's Dearborn plant or in the plants along the river section south of Detroit.

At 18 *m.* is a junction with US 24.

Right on US 24, a four- and two-lane by-pass of Detroit, is PONTIAC, 35 *m.* (932 alt., 64,928 pop.) (*see Tour 5a*), at a junction with US 10 (*see Tour 5a*).

The industrial life of FLAT ROCK, 21 *m.* (629 alt., 1,231 pop.), centers around a branch plant of the Ford Motor Company, where headlights and taillights are manufactured. Ford also owns and operates the water system. Flat Rock, one of the earliest settlements on the Huron River, dates from 1824 and has borne many names. However, it has always been popularly known as Smooth Rock or Flat Rock, because the bed of the river at this point cuts through a huge seamless formation of rock, part of the sandstone stratum that underlies the region.

MONROE, 36 *m.* (590 alt., 18,110 pop.), was settled by the French on the site of an Indian village on the River Raisin, four miles from its mouth in Lake Erie. At first called Frenchtown, the city was renamed by Governor Cass in honor of an expected visit from President Monroe. Numerically strong in this region, the Indians took an active part with the British in the War of 1812 and, at the battle of River Raisin, massacred hundreds of white prisoners.

In 1835, Monroe was the center of the 'Toledo War,' a bloodless campaign between the governments of Michigan and Ohio that grew out of a boundary dispute. When Ohio was admitted to the Union in 1803, the Great Lakes country was not sufficiently well known for surveyors to describe an accurate boundary line; Michigan was granted as a southern boundary in 1805 'a line drawn east from the southern end of Lake Michigan to Lake Erie.' This gave the new Territory of Michigan a strip of land across the northern part of Ohio. In 1817, a survey authorized by Congress placed the disputed strip wholly within Ohio limits, but Michigan still exercised jurisdiction over the territory. Thus matters stood in 1835, when Governor Lucas of Ohio issued a proclamation designed to establish the authority of the Ohio government in the disputed territory, by creating the county of Lucas, with Toledo as the county seat, and authorizing a court session to give it validity.

The Monroe County sheriff organized posses and raided Toledo, and both States called out their militia. Two conciliators sent by President Jackson were met by the Michigan militia, a thousand strong, who were encamped at Monroe. The Ohio forces, outnumbered, held a secret midnight session of court and carried away the brief records as proof that Lucas County had become a part of Ohio. The affair was

finally settled when Congress refused to admit Michigan to the Union unless it gave up all claims to the disputed territory. As a concession to Michigan's injured feelings, Congress carved the Upper Peninsula out of the Northwest Territory and offered it in trade for the Toledo strip. Development of the natural resources of the Upper Peninsula left no doubt that Michigan had profited by the settlement.

The first industry in Monroe was glass manufacture, made possible by heavy strata of siliceous sand and sandstone. As early as 1836, when glass was a luxury in Michigan, a plant with 60 skilled workers was opened in the settlement by two men named Hall and Grover. This plant, gradually expanding, produced most of the glass sold in the Middle West for several decades. However, other firms established plants in neighboring cities, near the Monroe sand, and the original firm went out of business. Two nurseries, established before 1850, produce vast quantities of trees, shrubs, and flowers, which have earned Monroe the name of the 'Floral City.' The major industry, however, is paper making; several plants manufacture such products as fiber boards and packing boxes. A rolling mill adds variety to the industrial scene.

The intersection of W. Elm Ave. and N. Monroe St. is the SITE OF THE FIRST BLOCKHOUSE, erected for protection against the Indians. The site of the massacre during the Battle of the River Raisin in the War of 1812, memorialized by a MASSACRE VICTIMS MONUMENT, is on the south side of E. Elm Ave. between Winchester St. and the junction with State 56.

General George A. Custer, whose troops were defeated by Sitting Bull and his warriors in 1876, made his home in Monroe for many years; he has been honored by the CUSTER EQUESTRIAN STATUE, E. Front and Navarre Sts., designed for the State by Edward C. Potter. The CUSTER HOUSE, 705 Cass St., reduced in size and moved from its original site, was the General's home.

On West Elm Avenue is ST. MARY'S ACADEMY, which occupies, with St. Mary's Convent and the Hall of the Divine Child, a campus of 300 acres. The Academy, completed in 1932, is a boarding and day school for 475 girls from the first grade through the twelfth. It is of soft-toned variegated brick with stone trim, designed by D. A. Bohlen and Son, of Indianapolis. From the central tower, of modified Gothic lines, radiate the five-story wings; set well back from the street in a deep lawn, the building is the outstanding architectural feature of Monroe. The HALL OF THE DIVINE CHILD, south of the Academy, is a boarding school for boys; the enrollment is 200.

ST. MARY'S CONVENT is the Mother House of the Sisters, Servants of the Immaculate Heart of Mary, a teaching order of the Roman Catholic Church (see *Marygrove College, Detroit*). The convent was founded in 1845 by the Reverend Louis Florent Gillet, in two small log cabins on the bank of the River Raisin four blocks east of the present site.

A CENTENNIAL ANNIVERSARY MONUMENT, erected in 1884 to commemorate the founding of Monroe's first Roman Catholic church, is on the grounds of ST. MARY'S CHURCH, W. Elm Ave. at N. Monroe St. The FIRST PRESBYTERIAN CHURCH, S. Washington and 1st Sts., was built in 1846. The building, the oldest Presbyterian church in Michigan, served as a station of the Underground Railroad in abolitionist times.

South of Monroe the highway is bordered for more than a mile by trees, shrubs, and flowers, arranged in neat patterns, the plantings of Monroe nurserymen.

US 25 crosses the OHIO LINE, 51 m., six miles north of Toledo, Ohio.

Tour 9A

Junction with US 25—Grosse Pointe Shores—Grosse Pointe Farms—Grosse Pointe—Grosse Pointe Park—Detroit; 19 m. Base Line Highway, Vernier Road, and E. Jefferson Ave.

Hard-surfaced roadbed, three lanes, between junction with US 25 and Grosse Pointe Shores, paved street, four lanes, between Grosse Pointe Shores and Detroit. Route covered by Detroit Street Railway between Grosse Pointe Park and Detroit (fare 6¢); Lakeshore Coach Lines, Inc., between Grosse Pointe Shores and Detroit (fare 20¢).

No accommodations.

The four communities, Grosse Pointe Shores, Grosse Pointe Farms, Grosse Pointe, and Grosse Pointe Park, all fronting upon Lake St. Clair, are known as Detroit's 'Gold Coast.' Here are the estates and summer homes of many of the men, and their descendants, who profited by the industrial development, not only of Detroit, but of Michigan. A fifth community, Lochmoor, although it does not front on Lake St. Clair, is also considered a part of the Grosse Pointe development. The history of Grosse Pointe differs little from that of its parent city, Detroit. About 50 years after the construction of Fort Pontchartrain on the present site of Detroit, the lake front of the Grosse Pointe district was divided into ribbon farms, which, although very narrow, extended back a mile or more into the territory of the friendly Huron and Ottawa tribes (*see Detroit*). During English occupation, Captain Alexander Grant bought a 640-acre farm on the present site of Grosse Pointe Farms. Grant, who was Commodore of the British Navy on the Great Lakes, erected a rambling hewn-log

house, 280 feet long and two stories high, known as Grant's Castle. The castle was a favorite gathering place for British officers and Detroit society of that period, and the Commodore, first to establish an estate on this part of the lake shore, is regarded as the founder of Anglicized Grosse Pointe. Wealthy Detroiters started to build in the area in the late 1840's, and, between that period and 1910, the lake front became popular as a site for summer homes. In 1910 the nature of the development changed, and it became a restricted suburb of Detroit, with houses that are occupied the year around.

The route proceeds east from the junction with US 25, 0 *m.* (see *Tour 9b*), on Base Line Highway (Eight Mile Road), which at Kelly Road merges with Vernier Road.

GROSSE POINTE WOODS, 3.5 *m.* (588 alt., 961 pop.), incorporated under present name in March 1939, after previous incorporation as village of Lochmoor. It is the most recent addition to the Grosse Pointe development.

GROSSE POINTE SHORES, 4.5 *m.* (585 alt., 621 pop.), is not so fully developed as its neighboring communities on the lake shore; it was incorporated as a village in 1911. The larger estates and homes of Grosse Pointe Shores, which has no business section, are built along the lake front on Lake Shore Road. Among them is the 85-acre EDSSEL FORD ESTATE (*private*), 1100 Lake Shore Drive. At the park entrance is a large gatekeeper's lodge, built of stone; trees and shrubs mask the sandstone house, which is not visible from the gateway. Albert Kahn of Detroit designed the mansion. Completed in 1928, its style is derived from the Cotswold type of English architecture. The grounds are parked and landscaped, and the lake shore itself has been improved.

The GROSSE POINTE YACHT CLUB (L), at the foot of Vernier Road, is the home port for many of the finest yachts in Great Lakes waters. The clubhouse, of modified Venetian design by Richmond and Morgan, was erected in 1929 on filled-in ground extending 1,200 feet into Lake St. Clair. A 187-foot tower is equipped with a powerful beacon and with ship's bells, which strike the hours throughout the sailing season. An outer harbor, 450 by 550 feet, with a retaining wall 12 feet in width, provides shelter and port facilities for the vessels. Adjoining this breakwater is a smaller harbor for lighter craft that also serves as a swimming pool for members and their guests. Within the landscaped grounds are courts for tennis and badminton, an archery range, and a plaza for outdoor dancing.

The route turns R. from Grosse Pointe Shores on Lake Shore Road, an extension of Detroit's Jefferson Avenue.

GROSSE POINTE FARMS, 6.5 *m.* (585 alt., 3,553 pop.), incorporated as a village in 1879, is the oldest and most highly developed section of the 'Gold Coast.' In winter the village is quiet, but with spring the first white sails appear upon the lake. Among the mansions on the waterfront is the JOHN DODGE HOME (*private*), sometimes called the Dodge Castle, which was left unfinished after the death of the

older Dodge brother in 1920. An American adaptation of Tudor architecture, by Smith, Hinchman and Grylls, the castle, erected at a cost of \$3,000,000, and built of Plymouth sandstone and half-timber work, has 118 rooms and 18 baths in various stages of completion. From the building, a tunnel for pedestrians underpasses Lake Shore Road and extends to the shore line, where there is a private wharf, also in an unfinished state. A high wire fence surrounds the estate, and unkempt shrubbery and trees have overrun the grounds.

The ALGER HOUSE (*open 1-5 daily except Mon.*), 32 Lake Shore Road, the gift of the family of the late Russell A. Alger to the City of Detroit, is the Grosse Pointe branch of the Detroit Institute of Arts. Designed by Charles A. Platt in the style of an Italian villa, the house provides an appropriate setting for a permanent collection of Renaissance painting, sculpture, tapestries, and *objets d'art*, arranged to suggest the domestic atmosphere of the greatest age of Italian art and culture. The three main rooms on the lower floor are furnished in the manner of a Florentine room of the fifteenth century, a Venetian room of the sixteenth, and an Italian room of the Baroque period. One of the loggias is devoted to Renaissance and Baroque sculpture, the other to Greek and Roman antiquities, such as might have been found in a private Classical collection of the Renaissance. A wide range of temporary exhibits is shown in the four galleries on the second floor. The museum is complemented by a spacious garden of yew and boxwood, an elaborate formal planting on Renaissance lines, with ornaments of ancient Roman and Italian sculptures.

The COUNTRY CLUB OF DETROIT (*private*), between Provencal and Seven Mile Roads, was originally located on the lake front near the foot of Fisher Road. Founded in 1897, it is believed to be the oldest golf and country club in Michigan. In 1927, the new site was purchased, and a clubhouse of English medieval style was erected at a cost of \$600,000. The building, with high roofs and chimneys, designed by Smith, Hinchman and Grylls, has timber and stucco gables, bays, and casement sash. Tennis courts and polo grounds are maintained on the premises in addition to an 18-hole golf course.

The CITY OF GROSSE POINTE, 9 *m.* (585 alt., 5,173 pop.), smallest in area of the four divisions along the lake shore, has a width of less than three-fourths of a mile.

GROSSE POINTE PARK, 9.8 *m.* (585 alt., 11,174 pop.), adjoining Detroit, is a community of marked contrasts, where the peace of quiet suburbs gives way to the rush and bustle of the city. Restrictions prevail, yet trade intrudes; and, on the main thoroughfare, with its incessant flow of traffic, there is no hint of the tranquillity that pervades residential streets a stone's throw away.

The history of the village antedates that of any other part of Grosse Pointe. Eleven years after the settlement of Detroit, in 1712, Fort Pontchartrain was besieged by Fox and Sauk Indians from Wisconsin, who had taken the warpath under the prodding of the English and their Iroquois allies from New York. On the nineteenth day of the

attack, a band of Huron and Ottawa, friends of the French, returned from their winter hunt and, outnumbering the Fox and Sauk band, forced the invaders to retire. The Wisconsin Indians re-formed and entrenched themselves on a little peninsula then known as Presque Isle, now a part of Grosse Pointe Park. Their enemies, led by the French, besieged them, and after a five-day battle they surrendered. They might better have fought on. All the captives were slain except the women and children and 120 warriors, who were imprisoned but later escaped. Most of the victims were slaughtered on Presque Isle, although the French took many prisoners back to the fort where 'their amusement was to shoot four or five each day.' Approximately 1,200 Fox and Sauk Indians died, and most of them were buried in shallow graves on the peninsula. Casualties among the French and their allies were comparatively few; about 60 were killed or wounded, 30 of whom died in the fort during the siege.

East Jefferson Avenue crosses the northwestern city limits of Detroit, 10 m., and proceeds to the junction with Woodward Avenue four blocks south of the Detroit City Hall.

DETROIT, 19 m. (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 12 (*see Tour 2a*), US 16 (*see Tour 4a*), US 10 (*see Tour 5a*), US 25 (*see Tour 9b*), and State 53 (*see Tour 10*).

Tour 9B

Detroit—River Rouge—Ecorse—Wyandotte—Trenton—Grosse Ile; 17.5 m. W. Jefferson Ave. and Van Horn Road.

Hard-surfaced roadbed, four lanes between Detroit and Trenton, two lanes between Trenton and Grosse Ile.

Route covered by Detroit Street Railway busses between Detroit and River Rouge (fare 6¢); by Detroit, Wyandotte and Trenton Transit Co. between Detroit and Wyandotte (fare 10¢).

County Tourist Lodge and Trailer Camp, Elizabeth Park, Trenton.

The area between Detroit and Grosse Ile is the downriver industrial district of the motor metropolis. In the seventeenth century it was frequented by French missionaries and explorers, who broke their journeys here to camp or trade at the native villages, the largest of which was Monguagon, or Maguaga. In 1701, Cadillac explored the district and camped on Grosse Ile, before erecting Fort Pontchartrain on the site of Detroit. Protected by the fort's garrison, the French

established themselves on their strip, or ribbon farms. In periods of war, however, the settlers had to seek refuge in the fort. When hostilities ceased, more often than not they had to rebuild, replant, and restock their ravaged homesteads. In 1762, Chief Pontiac held a council of war at Monguagon and used Grosse Ile as a base while attacking the English; and throughout the Revolutionary period the settlements along the river were the scene of fighting and bloodshed. In the War of 1812, Indians under the Shawnee chief, Tecumseh, massacred Captain McCullough and a number of scouts from General William Hull's army. Later Hull sent a retaliatory force against the Indians and their English allies, securing a victory in the Battle of Monguagon, where Trenton now stands. After the war and English retirement, pioneers pushing into Michigan from the East established a village called Grandport on the Ecorse River, near the site of an old Wyandot village and burial ground. For several years, there were less than a dozen families in the new settlement, but, after the opening of the Erie Canal in 1825 and the building of steamships on the Great Lakes, the village grew into a substantial shipping and trading center. By the end of the Civil War, other communities had begun to appear along the river front, bringing sawmills, steel mills, and shipbuilding plants to the district. Through the terms of a treaty made in 1818, the Wyandot, the last tribe to occupy the region, were removed to a reservation on the Huron River, a site that has been preserved as a unit of the Wayne County park system.

The geological structure of the district and of the territory beyond, as far as the Raisin River, heavily stratified with salt, dolomite, siliceous sand, and other nonmetallic minerals, has greatly influenced the industrialization, not only of the downriver cities, but also of Detroit and Michigan. The sand and sandstone, belonging to the Sylvanian formation, are of fine quality and have been widely used in the manufacture of plate glass for windshields in the motor industry. Limestone of the Trenton series, appearing on or near the surface, has been quarried in great quantities and, in some instances, used in making lime, silica, and magnesium carbonate. Other dolomites and mixed salts, lying below the Monroe and Dundee, have not been extensively developed; but the pure rock salt of the Salina has become the basic product of two important industries, commercial salt and alkali manufacturing. Among the innumerable products using salt as an ingredient is soda ash, used in making glass, soaps, paper, paints, enamelware, cleansers, drugs, and other chemicals. Salt is also utilized in the manufacture of chlorine, bicarbonate of soda, and caustic soda.

In this area is the only salt mine in Michigan operating an inclined shaft and using the room and pillar method of extracting the product. The sodium chloride deposits—or rock salt—are found in the Salina series in many parts of the Lower Peninsula, but only in this section are the beds of sufficient thickness to permit profitable shaft mining. In other salt mines in the downriver district and throughout the State, the salt is extracted in the form of natural and artificial brines, which

are evaporated to obtain the product. The thickest salt strata in this district usually appear at approximately 1,400 feet and extend down to 1,600 feet; the mining beds, varying from 20 to 34 feet in thickness, are found at 1,135 feet. In sinking the shaft of the Detroit Rock Salt Mine (*not open*), which was started in 1904, pockets of dangerous hydrogen-sulphide gas, nine strata of rock, and six water horizons were encountered, before a bed of sufficiently pure sodium chloride was found at 878 feet. This bed, however, had a thickness of only 10 feet, and the mine was extended to the 1,135-foot level before establishing a pit. In mining rock salt, hundreds of tons are blasted down and transported in this crude form to the mill near the shaft, where it is crushed and screened. The entire output of the mine is sold to chemical firms and other processing companies.

DETROIT, 0 *m.* (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 12 (*see Tour 2a*), US 16 (*see Tour 4a*), US 10 (*see Tour 5a*), US 25 (*see Tour 9b*), and State 53 (*see Tour 10*).

West Jefferson Avenue starts at Woodward Avenue three blocks south of the Detroit City Hall. The route is westward on West Jefferson Avenue to the River Rouge, which forms the northeastern boundary of RIVER ROUGE, 5 *m.* (578 alt., 17,317 pop.), the first of four cities in the downriver industrial group. River Rouge became a village in 1899 and retained this status until 1921, when rapid growth, partly induced by Ford's Rouge developments near by, brought about its incorporation as a city. None of its industrial plants is open to the public. One of the oldest and largest companies in the city is the GREAT LAKES ENGINEERING WORKS, formerly S. F. Hodge & Company, builders of machinery and marine engines. In 1903, the company added a large shipbuilding plant and floating dry docks to its holdings on the river front; and in 1910, the firm, extending its operations, acquired a tract of land at the terminal port of Ashtabula, Ohio, and constructed another shipbuilding plant and a series of dry docks. A decade later the property was sold to an Eastern syndicate, which voted to continue operations under the current name. The number of employees in December 1937 was 780.

In the northeast corner of the city is ZUG ISLAND (L) formed by a deepwater canal connecting the Detroit and Rouge Rivers. The canal was dredged by Henry Ford after the Ford plant had been moved from Highland Park (*see Highland Park*) to its present location on the Rouge (*see Dearborn*). After the project was finished and the turning basin and docks were built, landowners along the slip entered suit against Ford for damages totaling several million dollars. The case remained in court approximately two years, but, in the end, the plaintiffs won, and Ford made an adjustment on each piece of property. The island, which contains about 400 acres, is occupied entirely by manufacturing plants. On the Detroit River side is the HANNA FURNACE PLANT, which converts iron ore into pigs for the open hearth furnaces of the Great Lakes Steel Corporation. Facing the canal and

Detroit River is the STANDARD OIL REFINERY, where the refining and manufacturing for the Detroit area is done. On the Rouge side are the properties of the DIXIE FUEL TERMINAL, which handles fuel and supplies in great tonnage.

Farther along the Rouge, on the mainland, is the U. S. GYPSUM PLANT, 10090 W. Jefferson Ave., a branch of the Philadelphia firm of the same name, which produces, among other things, plaster, alabaster, and a variety of soil dressings. The raw material for this plant is mined at Alabaster (*see Tour 11A*). At the northern edge of the city is the WHITEHEAD & KALES PLANT, 58 Haltiner St., manufacturing trailers and other fabricated steel products.

ECORSE, 6.5 m. (583 alt., 12,716 pop.), oldest of the downriver cities, occupies approximately two sections of land at the mouth of a little stream known to the French as the *Rivière Aux Ecorses*, because of the amount of bark along the shore where Indians made their canoes. The village, originally named Grandport, was established on a Wyandot camping site and burial ground at the close of the War of 1812. French pioneers, some of whom were descendants of Cadillac's companions, had been living in the district for a century or more. With the change in regime, they lost their control of the fur trade; later, when others were helping to build the industrial age, they—the Labadies, Campaus, Rousseaus, Goodells, and Riopelles—remained the chief land holders. The descendants of many of these old families are among the leading citizens of the city.

During prohibition, Ecorse became notorious as a rumrunners' paradise, for this section of the river was outside the jurisdiction of Detroit Police, and river islands afforded a measure of protection against the long arm of the Federal law. In this locality, where rumrunning reached its greatest height, the traffic passed through three important phases during the 12 years the Eighteenth Amendment remained in force. At the outset, strong-armed sailors, capable of rowing the river in an hour and forty minutes, made trips between Canada and the United States, bringing in at each crossing two or three cases of whiskey, valued normally at about \$25 each, which found a ready sale at \$100 a case. As the traffic increased, this class of runners was supplanted by young men with light outboard motorboats, which not only cut the crossing time to about ten minutes, but carried so much more liquor that the industry rapidly assumed big-business proportions. The underworld stepped in, and gangsters with speedboats, armed and ready to kill, took over the traffic. Ecorse became the Nation's Number One port of entry for illicit Canadian liquors, and fabulous fortunes were made in the business. The waterfront was shut off by a high board fence, and huge boatwells with bullet-proof doors were erected; at irregular intervals, powerful speedboats, far swifter than the Government craft, whipped in from the channel and disappeared in the wells. Minutes after a landing had been made, fast motorcars were speeding with the heavy cargo toward clubs, roadhouses, and private homes in Michigan, Ohio, and other States. The development of Rum-

mer's Row had been slow, but its fall was sudden and its demise complete. After repeal, village authorities widened West Jefferson Avenue, removed the shore-line fence, and established a municipal park and playground along the waterfront. Soon every mark of the rumrunning era was effaced. Although the most spectacular business in Ecorse was gone, its passing did not affect legitimate commerce in the city.

Among the conventional industries that have flourished in Ecorse is the GREAT LAKES STEEL PLANT (*not open*), Tecumseh Road, which occupies 225 acres on the river front and is the largest open-hearth plant in the State. A canal permits shipping by water, and two railroads serve the plant by land. Originally the factory site was a marsh, and, to provide a solid foundation for the buildings, 3,000,000 cubic feet of sand were deposited, and 75,000 piles were driven 88 feet to bedrock. The plant, opened in the fall of 1930, includes 12 open-hearth furnaces of 150-ton capacity each, and a blooming mill, rolling mill, bar and billet mill, a strip mill, and two merchant mills. Using oil for fuel, the plant has a capacity of 250,000 tons of finished-steel products annually.

Opposite Ecorse, in Canadian waters, is FIGHTING ISLAND, formerly a summer resort, which has a length of about 10 miles and an area of 2,000 acres. As late as 1858, the island, because of its game and fish, was occupied by a band of Wyandot, but today it is deserted except during the hunting and fishing seasons.

The site of WYANDOTTE, 8.5 *m.* (585 alt., 28,368 pop.), the largest and most important of the industrial cities on the river south of Detroit, was first occupied by Wyandot Indians, who established a village on the river front after the founding of Fort Pontchartrain. After their removal in 1818, Major John Biddle obtained 2,200 acres of land in the area, which included the Indian village site, and established a farm. Early in 1853, Captain Eber B. Ward, a Detroit shipping magnate, purchased the Biddle estate and established the Eureka Iron and Steel Company on the waterfront, the first plant of its kind in the Detroit area. A blast furnace and rolling mill were built, and a settlement was platted. In the next 20 years, Wyandotte pioneered in the steel industry with two important firsts: the first steel analysis laboratory in the United States (1862), and the manufacture of the first Bessemer steel in America (1864). In 1867, keeping pace with this industrial expansion, Wyandotte was incorporated as a city. Because of the mill's position between the ore beds of upper Michigan and the coal fields of Ohio and Indiana, it seemed probable that it would become one of the most successful plants in the Nation; but Ward had overreached himself. When he fell dead in Detroit in 1875, his partners, hit by the panic of 1873, permitted the mill to fall into ruin. For a while it seemed that the city might go the way of the plant; but, two years before his death, Captain Ward had drilled an oil and gas well on his property, which, although it proved unproductive, revealed the existence of an immense salt bed of good quality and not too deep to be exploited commercially.

In 1891, J. B. Ford, a Pittsburgh glassmaker, drilled several experimental wells and established a small salt works. Soda ash, formerly imported from Belgium for use in the manufacture of plate glass, was at first the chief product of the mine. As the industry expanded, caustic soda, baking soda, calcium chloride, magnesium, bromine, and other products were also processed from the salt. The bromine was especially valuable as an ingredient in the manufacture of dyes, drugs, and disinfectants. In recent years, a line of lyes, soaps, and numerous cleaners has been developed from the mine's output. The J. B. FORD PLANT (*not open*), 1532 Biddle Ave., is the parent firm of the several plants in the local alkali industry. The MICHIGAN ALKALI PLANT No. 2 (*not open*), Biddle and Alkali Aves., a J. B. Ford subsidiary, covers more than 200 acres on the waterfront near the entrance to West Channel. Numerous canals have been dredged among the buildings, and much of its shipping is done by water. The company has no mines; the rock salt is dissolved in wells with hot water forced in by thermal pumps. At 2253 Biddle Ave. is the MICHIGAN ALKALI CLUB, a social and recreational organization sponsored by the company for its employees. PLANT No. 1 (*not open*), Biddle Ave. and Orange St., on the waterfront at the south end of town, is smaller than No. 2, but some of the buildings and equipment are more modern. In 1937-8, the company constructed a \$1,000,000 addition to this south-end plant, for the production of chlorine and caustic soda by an English process. The firm is one of two concerns in the State producing calcium chloride, used as a dust palliative on the highways, in road stabilization, and as an agent for rapid hardening of concrete. There are many wells in operation on the grounds, and the output of this plant, in conjunction with that of No. 2, ranks second in the alkali industry of America.

The DETROIT SODA PRODUCTS PLANT (*not open*), 35 George St., adjoining Michigan Alkali Plant No. 2, produces sal soda, baking soda, alkalies, and industrial chemicals. The PENNSYLVANIA SALT PLANT (*not open*), Biddle and Pennsylvania Sts., a branch of the Philadelphia firm of the same name, is devoted to the production of salt and heavy chemicals. The SHARPLES SOLVENTS PLANT (*not open*), 4700 Biddle St., a branch of the Sharples Specialty Company of Philadelphia, manufactures amyl acetate, alcohol, paint dryers, and similar products. The company has a holding of 70 acres on the river and improvements valued at approximately \$1,000,000. The ALL-METAL PRODUCTS PLANT (*not open*), 1167 Sycamore St., one of the few nonchemical firms in Wyandotte, makes popguns, spring pistols, children's airplanes, and other steel toys.

TRENTON, 13 m. (588 alt., 4,022 pop.), founded on the ruins of another Wyandot village, occupies the highest point on the river between Detroit and Lake Erie. An agricultural trading center that is constantly expanding, Trenton has an unusually low tax rate: in 1930, its assessed valuation was \$21,000,000; the debt, \$450,000; and tax rate, \$9 per thousand.

The history of Trenton began during the War of 1812. While the

area was still a wilderness, a United States force of 600 under Colonel James Miller met and defeated a British and Indian detachment of 700 commanded by a Captain Muir and the Indian chief, Tecumseh. The first settler in the area was Major Caleb Truax, a bounty land surveyor, who came from New York in 1816 and, when the Indians lost their title to the territory, acquired the village site and large tracts of land surrounding it. Truax erected a sawmill, a church, and a store, and was the chief citizen of the village that was platted in 1827 under the name of Truaxton. When steam navigation was inaugurated on the Great Lakes, Truaxton became a port of call; and when the ship *Superior*, successor to the *Walk-in-the-Water*, included the settlement in its itinerary, new docks were built and the waterfront was improved.

In 1840, because of the stands of fine oak in the district, a shipyard was established, and Truaxton became a shipbuilding center that flourished until wooden vessels became obsolete. In 1869, the *American Champion*—the *Leviathan* of its time—was launched, marking the high tide in ship construction at the village. Its position on the river and its shipbuilding industry made the little community one of the early commercial fishing ports in these waters; and expansion at Detroit, Toledo, and other points, after the opening of the Erie Canal in 1825, led to the development of large quarries near Trenton for the production of lime and building stone. When the railroad from Detroit entered the settlement, a period of extraordinary growth and development ensued; and in 1875, three years after the line was completed to Buffalo, New York, Truaxton was incorporated as a village, and the name was changed to Trenton for the limestone of the Trenton series found in the environs.

Trenton today has two miles of improved waterfront, with docks, boatwells, boat basins, and parkways. At the southern end of the village is ELIZABETH PARK (L), 16 m., oldest unit of the Wayne County park system, which occupies 162 acres of Slocum's Island donated to the county by heirs of Elizabeth Slocum, a direct descendant of Major Truax. Valued at more than \$1,000,000, the park has been landscaped and provided with field stoves and picnic tables. The island, linked with the mainland by a vehicle bridge and three foot-bridges, is circled by a three-lane concrete road, intersected by numerous drives and paths. A large concrete dock on the Detroit River serves as a landing for both large passenger craft and speedboats. Recreation facilities include a standard baseball diamond, a pony drive, tennis courts, horseshoe and shuffleboard courts, a wading pool, and playground equipment.

THE WAYNE COUNTY TOURIST LODGE AND CAMP (trailers \$3.50 weekly; laundry, showers, lunch room, restroom), 16.5 m., is maintained by the county road commission, in connection with Elizabeth Park. The parking grounds can accommodate approximately 50 trailers.

At 17 m. is the junction with Van Horn Road, which is the main route (L) to GROSSE ILE (Fr., Grand Island), 17.5 m., approximately seven miles long and one-and-a-half miles wide, the largest of the numerous islands in the Detroit River. The high shore line and the

beauty of the place endeared the island to explorers and missionaries, from the earliest days. Father Hennepin in 1679 included it in his description of the straits between Lake Erie and Lake Huron; and nine years later, Baron La Hontan, writing of his trip up the Detroit River, mentioned the numerous 'harts and roebucks' seen feeding on the islands. In 1701, Cadillac considered erecting Fort Pontchartrain on the bluffs of the eastern shore, but, deterred by the limited supply of timber, he moved upstream and occupied the point at the confluence of Savoyard Creek and the river. Nevertheless, the Ile continued to be one of his favored spots, and in 1707 he deeded it to his daughter Magdalene in a grant that extended 'three leagues' southward from the Ecorse River; but the founder of Detroit was removed in 1711, and all his possessions and those of his children were confiscated by the crown.

In 1740, Father de la Richardie, a Jesuit, decided to settle a band of Huron on the island and establish a mission; but, after obtaining Governmental consent, he found it was too near Detroit, a center hostile to Jesuits, and so he settled on Bob-Lo (Bois Blanc) Island, farther down the river. While Detroit was under siege in 1763, the Huron, Ottawa, and other tribes serving under Pontiac occupied Grosse Ile as a base from which to attack the ships that came from Niagara to the besieged garrison. When the French crown lost New France to the English, the Potawatomi, ignoring the rights of the Wyandot and Ottawa, laid claim to the Ile and much of the surrounding territory; and in July 1776, two days after the signing of the Declaration of Independence, this tribe transferred the title, by treaty, to Alexander and William Macomb, Detroit land holders and merchants. William Macomb soon came into sole possession of the island, but, when he sought to have the deed recorded, the English Government, for whom he and his brother were agents, would not sanction the deal. After Michigan became a Territory, however, a patent confirming the title to heirs of William Macomb was signed by President James Madison, and, since that time, the island has been owned by descendants of William Macomb or their grantees.

At the close of the War of 1812, hostile Indians harassed the Macomb tenants on the Ile, stealing livestock and kidnapping children for ransom. To end the depredations, the Government sent a company of soldiers to the district under Corporal John B. Jones. The soldiers rounded up the Indians without difficulty, but one of them, Akockis (Black Duck), drew a gun and attempted to murder David B. Macomb, who was with the party. Corporal Jones shot the Indian down. Akockis later died of his wounds in Ontario, and Colonel Reginald James, military commandant at Fort Malden, wrote to Governor Cass, denouncing Jones and Macomb. Cass defended the soldiers, and a spirited correspondence followed. When it seemed that Colonel James was determined to take action, Governor Cass issued a proclamation ordering border citizens to resist any British invasion or attempt to apprehend American citizens on United States soil. Following this show

of belligerency, Colonel James permitted Cass to settle the affair with the Indians in his own way; this Cass did, by distributing 40 quarts of whiskey.

In 1873, the Chicago & Canadian Southern Railroad was completed between Detroit and Buffalo, crossing Grosse Ile and Stony Island and connecting with the Canadian shore by ferries. As traffic increased on this direct route, it was decided to construct a railway tunnel under the river from Grosse Ile and to eliminate the ferries; work was begun in 1879, but the project soon ended, when it was discovered that the limestone formation under the river was faulty, and the tunnel could be finished only at prohibitive costs. Today, Grosse Ile, like Grosse Pointe, upriver from Detroit (*see Tour 9A*), is an exclusive residential area. The island is an independent township, with a post office and a public school system.

The UNITED STATES NAVAL BASE and GROSSE ILE AIRPORT (*open by permission*), Groh Road and South Shore, is the training station for the U. S. Naval Reserve Aviation Headquarters. It has been designated by the U. S. Treasury Department as an international point of entry for aircraft. The airport is equipped with a 3,000-foot landing field that provides day and night landings in six directions. Two hangars are maintained, one for seaplanes and another for dirigibles. Besides the hangars and headquarters buildings, there is an apartment house for members of the base staff. It was at this airport in 1928 that the first all-metal dirigible was constructed and successfully flown.

The GREAT FLOWING WELL, South Point Road, with a depth of 2,375 feet, produces more than 2,000,000 gallons of water daily under an 11-pound pumping pressure. A great iron wheel aids in generating power. The flow was discovered in 1909 by wildcat operators drilling for oil on the lower end of the island.

The TREATY STONE, E. River Road and Gray Drive, a rock and concrete marker erected in 1906, commemorates the transfer of Grosse Ile to William and Alexander Macomb. The treaty was signed by 18 chiefs of the Potawatomi on July 6, 1776.

ELBAMAR (*private*), on Elba Island, near the junction of Groh and East River Roads, property of Ransom E. Olds, between 1928 and 1930 housed the Chateau Voyageurs Club, rendezvous for travelers by air, land, and water. Members used Grosse Ile Airport for landings and Elbamar for social activities. The principal building on the estate, which includes most of the 162-acre island, is an Italian Renaissance clubhouse, surrounded by formal gardens. In the west wing is a Pompeian swimming pool, enclosed by a colonnade open to the sky.

The LITTLE COTE, East River Road, is a house of Victorian Gothic style erected in 1856. The building is of stone, with four gabled wings. The north walls are covered with ivy from Melrose Abbey, Scotland; ivy on the south wall is from the Hudson River home of Washington Irving.

ST. JAMES EPISCOPAL CHURCH, East River Road, a charming example of the use of wood in Gothic architecture, was designed by Gordon W. Lloyd, who also prepared the plans for St. John's Church in downtown Detroit. The main façade, framed by ancient oak trees, has a leaded-glass window by Tiffany, surmounted by a small Gothic belfry. The side walls are of wide batted boards, broken by wood buttresses that correspond to the roof trusses.

THE CHURCH OF THE SACRED HEART, East River Road, a field-stone structure, occupies the spot where, according to tradition, Cadillac and his followers spent the night in debate, trying to decide upon a location for Fort Pontchartrain. Tombstones in the cemetery record the names of many pioneers in Michigan territory.

Tour 10

Port Austin—Bad Axe—Imlay City—Romeo—Detroit; 125 *m.* State 53.

Roadbed hard-surfaced except for a short graveled stretch between Popple and Hemans

Pere Marquette Ry. parallels route between Port Austin and Bad Axe; Michigan Central R R between Utica and Detroit

Usual accommodations throughout.

From Port Austin on the shores of Lake Huron at the tip of the Thumb, State 53 runs southward through an area of farms and small-game hunting lands to the great industrial area of Detroit in southeastern Michigan. Along the northern section of the route, the communities are chiefly marketing centers for grains and vegetables; beans are the major crop, especially in Huron County, which is the largest producer of this vegetable in the State. Small-game hunting is excellent; during the autumn, hunters beat the fields and swamps for pheasants, rabbits, and partridges. Farther south, in the vicinity of Romeo, a fruit belt owes its abundant yield to climatic conditions similar to those of the fruit region on the Lake Michigan shore.

PORT AUSTIN, 0 *m.* (600 alt., 503 pop.) (*see Tour 9a*), is at a junction with US 25 (*see Tour 9a*).

At 7.5 *m.* is a junction with County 588.

Left on this road is KINDE, 0.5 *m.* (600 alt., 412 pop.), a farm village inhabited by people of Polish descent. It is good pheasant territory, adjacent to heavily hunted duck marshes.

In FILION, 11 *m.* (500 pop.), a small French-Canadian community founded in 1861, honey is the leading product. Each fall, at the DAVID RUNNING APIARY, largest honey producer in Huron County, visitors may watch attendants, equipped with veils and gloves, remove the honeycombs from the hives. Filion, too, has several hunters' clubs.

BAD AXE, 17 *m.* (700 alt., 2,332 pop.), owes its name to a broken ax found on the site by surveyors. Before the Post Office Department banned 'picture' addresses, letters addressed with only a sketch of a broken ax were often delivered from distant points. A milk plant and a factory for drying and packing chicory are the community's principal industries.

The ALBERT E. SLEEPER HOUSE, on West Huron Ave., a large brick structure in beautifully landscaped grounds, was the residence of Albert E. Sleeper (1862-1934), governor of Michigan (1917-21). A GRINDSTONE MONUMENT on the courthouse lawn commemorates the hundredth anniversary of the grindstone industry in Huron County—an industry displaced by the development of carborundum (*see Grindstone City, Tour 9a*). In the CITY PARK (*camping accommodations*), a well-kept recreational center, is preserved a LOG SCHOOLHOUSE, the only remaining log school building in the county.

Most of the villages in this area are marketing or shipping points for beans, chicory, sugar beets, hay, flax, wheat, and cattle.

Left from Bad Axe on State 83 to a junction with State 19, 3 *m.*; R. to UBLY, 7 *m.* (620 alt., 480 pop.), location of the THUMB ELECTRIC CO-OPERATIVE STATION, a Rural Electrification Administration project, operating since 1938. Erected at a cost of \$2,000,000, the plant carries electricity to more than 4,000 rural homes in the Thumb district. The Thumb Electric Co-operative serves as few as three customers to the mile, makes no charge for installation, and finances 80 per cent of the wiring costs up to \$600.

At 30 *m.* is a junction with County 564.

Left on this road is NEW GREENLEAF, 1 *m.* (25 pop.), a country four corners established in 1914, when the Detroit and Huron Railroad came through. Along the north branch of the Cass River near by are the only known Indian rock carvings in the State. On large rocks protruding from the ground, over an area of four acres, are thousands of INDIAN PICTOGRAPHS—outlines of men, animals, birds, and other figures. White men have defaced these pictographs with chisel marks, making them difficult to decipher.

HEMANS, 44 *m.* (25 pop.), a settlement once known as Poverty Nook, was renamed in 1914 for the Michigan historian, Lawton T. Hemans (1864-1916).

At 47 *m.* is a junction with State 46 (*see Tour 7a*).

MARLETTE, 53 *m.* (838 alt., 990 pop.), trades in livestock, feed, and dairy products. A large sales arena provides a livestock market for farmers in the Thumb. Marlette's consolidated school system, established in 1935, was the first of its kind in the Thumb district.

BURNSIDE, 61 *m.* (30 pop.), once an important distributing center for the German farmers who pioneered this region, has dwindled to little more than another refueling stop.

Left from Burnside on State 90 to BROWN CITY, 5 *m.* (811 alt., 785 pop.), State headquarters of the Mennonite sect, a thrifty, quiet, and capable people. A few years ago, they were so strict that they excommunicated a fellow member for 'running around with the giddy Methodists'; today, they differ in no outward respect from their neighbors.

At 63 *m.* is a junction with an earth road.

Left on this road to DEANVILLE MOUNTAIN, 16 *m.*, which is surrounded by springs and flowing wells. Its summit affords a sweeping view of the countryside, and on a clear day, with the aid of a good glass, steamers are visible on Lake Huron, 30 miles eastward.

At 65 *m.* is a junction with County 500.

Left on this road to the CHARLES T. GRENAT FARMS (R), 0.7 *m.*, formerly the Roy Young farm, where excavations in 1934 uncovered the remains of an ancient Indian village and burial ground, believed to be of Algonquian origin. Skeletons found here have provided anthropologists with information concerning infant mortality and the prevalence of certain diseases among the aborigines. That the Indians possessed an elementary knowledge of surgery is revealed by the scars and knitted fractures found on many of the bones.

IMLAY CITY, 74 *m.* (500 alt., 1,495 pop.), is chiefly an agricultural center. Its two factories produce castings for use in Detroit automotive plants. The Lapeer County Fair, one of the largest in eastern Michigan, is held here each August or September. Former residents of Holland (*see Holland*) have established celery farms on the rich muck land in the vicinity of Imlay City.

At 79.5 *m.* is a junction with State 181.

Right on State 181 is DRYDEN, 3.5 *m.* (920 alt., 383 pop.), originally called Lamb's Corners but renamed for the English poet, John Dryden. The village is a small trading center for horse-breeders and agriculturalists. Every year, on July 20, a local Horse Festival, on the pattern of a country fair, attracts many breeders and fanciers. Dryden is the birthplace of General George O. Squier (1865-1934), soldier, scientist, and philanthropist.

Left from Dryden on Mill Road to the SQUIER COMMUNITY CLUB (*open May 30-Dec. 1*), 5 *m.*, a 90-acre park and pleasure ground planned by General Squier. A \$15,000 clubhouse, erected in 1918, contains a community hall, fully equipped kitchen, and other accommodations. Outside are fireplaces, picnic tables, and playground equipment; near the entrance is a large camping ground. In a spacious athletic field are baseball diamond, tennis and croquet courts, and grounds for horseshoe pitching. A golf course is also available. General Squier maintained the park for public use until his death in 1934, and, in 1936, his heirs presented the property to Lapeer County, on condition that visitors leave the park as neat as they found it, the General's only stipulation to his guests. The club was host to 12,000 visitors during its first year under county operation.

ALMONT, 81.5 *m.* (500 alt., 844 pop.), is a farming village with a small lock factory. Southward, the route enters a fruit belt in which the intensive cultivation and care of the orchards transcends all other local interests.

ROMEO, 90.5 *m.* (831 alt., 2,283 pop.), set among orchard-covered hills, was originally an Indian village and trading point for French settlers and *coureurs de bois*. Sixty New Englanders, coming westward

by the Erie Canal, settled here in 1827; nine years later 30 frame houses had been erected. The first colonists were persons of culture, and their New England tradition exerted a strong influence on both the architecture and the educational standards of the growing village. Eastern habits of thought undoubtedly had something to do with the adoption of the name, selected by a colonist anxious 'to avoid the commonplace.' Romeo is a pleasant community of landscaped lawns, overhung by the arching branches of old trees. Romeo fruit growers have a reputation for progressive marketing and farming methods. A mill that makes cloth from old rags and another that produces wood-work contribute to the village's income.

Romeo was once an important educational center, with several institutes, halls, and academies, all of which have disappeared. A large stone in front of the high school on Prospect Street marks the SITE OF THE ROMEO ACADEMY (1835-43).

The Romeo Peach Festival, held annually about Labor Day, is evidence of the community's interest in its orchards. Busses take visitors to the orchards, where they may eat as much of the tree-ripened fruit as they wish.

Left from Romeo on County 446 (Division Road) to the junction with Zielish Road, 2.5 m.; R. here to the ROMEO CASCADES, 3.5 m., a recreational spot adjoining beautiful CASCADE LAKE (*fishing and boating*) Meals are served at a large remodeled Colonial clubhouse (*tennis courts and bowling greens*). The surrounding country is well suited to hiking and horseback riding.

Near Romeo are wooded rolling lands, well stocked with squirrel, pheasant, and rabbit; several lakes and streams offer good fishing. Pleasant drives wind through the hills, some passing observation towers from which the smoke of boats on Lake St. Clair, 20 miles eastward, can be seen.

WASHINGTON, 96 m. (400 pop.), in a range of low hills, was named by the pioneer settlers for the first President of the United States. Washington was once the home of William A. Burt, inventor of the first writing machine, a forerunner of the modern typewriter. Patented in 1829 as a 'typographer,' the machine brought fame to its inventor, but even the oldest residents cannot designate the site of the carpenter's shop occupied by Burt between 1823 and 1833. In addition to the 'typographer,' Burt invented the solar compass in 1836 and the equatorial sextant in 1844. He designed and built many sawmills, was a member of the territorial legislature, an associate territorial judge, and a Federal and county surveyor. With Douglass Houghton, the State's first geologist, he surveyed the Upper Peninsula and was in part responsible for the discovery of the vast iron ore deposits of that region. After Houghton's death, Burt alone completed the compilation of their historically important reports on the geology of Michigan.

The LOREN ANDRUS HOUSE, 5763 Van Dyke Ave., built about 1834, is a good example of the octagonal dwellings that at one time were considered the last word in functional design. The interior has a central

spiral stairway, triangular room-size alcoves off each apartment, and handmade maple doors and old wall decorations. Opposite this structure is the OLD ANDRUS HOUSE, 5850 Van Dyke Ave., built in 1821.

At 98.5 *m.* is a junction with County 436.

Right on this road to the PARKE DAVIS BIOLOGICAL FARM (*open by permission*), 5.5 *m.*, recognized by its model buildings and attractive grounds (L). Horses, cattle, fowl, and other livestock are kept here for the production of serum supplies. Clinical standards of cleanliness prevail in the farm buildings, where the odor of disinfectants and the immaculate white uniforms of the attendants give the impression that these are scientific laboratories rather than stalls and pens. The serums are prepared at the company's laboratories in Detroit.

ROCHESTER, 6 *m.* (756 alt., 3,554 pop.), lies between the high bluffs of the Clinton River on the south and the banks of winding Paint Creek on the north. Steep hills and the broad stream-laced valley attract many residents, especially workers in the automobile plants of Pontiac, a few miles to the west. Rochester's industrial units are a foundry, a knitting works, a paper company, and a biological farm.

The AVON HALL OF RELICS, on the second floor of the ROCHESTER PUBLIC LIBRARY, W 5th and Pine Sts., houses a representative collection of pioneer relics. AVON PARK, Ludlow Ave. west of Main St., is equipped for picnicking, and has an artificial swimming pool. Rochester is a popular starting point for excursions into the wooded areas to the north and west.

DISCO, 99.5 *m.* (125 pop.), was named for the Disco Academy (1864), around which the village was platted. With the improvement of the modern school system, private academies throughout the State declined. The Disco Academy building, on Van Dyke Avenue, now houses a beer garden.

The million-dollar PACKARD MOTOR CAR PROVING GROUND, 101 *m.* may be visited by permission.

UTICA, 105 *m.* (650 alt., 873 pop.), on a steep slope above the Clinton River, was originally known as Hog's Hollow. A German community settled here in 1817. Utica is the home of many retired farmers. Rhubarb is grown extensively in the neighborhood.

At the foot of the hill on Main Street is the course of the old CLINTON-KALAMAZOO CANAL, a project designed to link Lake St. Clair with Lake Michigan by way of the Clinton and Kalamazoo Rivers. Under legislative approval, work was begun in 1837-8 in the bed of the Clinton River near Mount Clemens, and progressed as far as Rochester. But the success of the venture depended upon raising \$5,000,000 in the East, and, when this proved impossible, the project was abandoned. Two boats carried flour from Utica mills along the completed section for a few years, but, with the spread of the railroads, these crafts were removed and the canal fell into disuse. Today water cascades over the masonry of the old canal locks between Mount Clemens and Utica, and the section from Utica to Rochester supplies water for the race of the UTICA MILLS (L), on Main Street, which have manufactured flour since 1846.

The OLD UTICA HOUSE, on the summit of Main Street hill, was at one time a wildcat bank.

CENTERLINE, 114 *m.* (615 alt., 2,604 pop.), settled in 1857, is a suburb of Detroit, where many of its residents are employed.

VAN DYKE, 115 *m.* (5,000 pop.), another suburb, has named many of its streets for Michigan-made cars. This system was started in 1917 by Walter C. Piper, a local landowner, who subdivided the area and built homes for Detroit auto workers. The principal north-south thoroughfare (State 53) is Automobile Boulevard. East-west streets bear well-known trade names, some known the world around—Ford, Packard, Dodge, Cadillac, Lincoln, Hudson, Hupp, and Studebaker; others, such as Chalmers, Maxwell, Paige, Jewett, Saxon, King, Jackson, Liberty, Republic, and Continental, are the names of cars no longer manufactured.

DETROIT, 125 *m.* (650 alt., 1,568,662 pop.) (*see Detroit*).

Detroit is at a junction with US 112 (*see Tour 1*), US 12 (*see Tour 2a*), US 16 (*see Tour 4a*), US 10 (*see Tour 5a*), and US 25 (*see Tour 9b*).

Tour 11

Mackinaw City—Cheboygan—Alpena—Bay City—Flint—Ann Arbor—(Toledo, Ohio); US 23.

Mackinaw City to Ohio Line, 398 *m.*

Roadbed hard-surfaced or graveled throughout.

Michigan Central R.R. parallels route between Mackinaw City and Cheboygan; Detroit and Mackinaw R.R. between Cheboygan and Tawas City, and between Pinconning and Bay City, Michigan Central R.R. between Standish and Saginaw; Pere Marquette Ry. between Bay City and Flint; Ann Arbor R.R. between Ann Arbor and Toledo, Ohio.

Accommodations at short intervals.

From the land of Michilimackinac (Chippewa, big turtle), first sighted by a white man three centuries ago, US 23 twists along the Lake Huron shore through territories drained by four famous lumbering waterways—the Cheboygan, Thunder Bay, Au Sable, and Saginaw Rivers. Each year, work goes forward on new sections of the road that ultimately will become a shore-line highway from the Straits of Mackinac to Saginaw Bay. This section of lakes, trees, and solitude has contributed much to Michigan's fame as an outstanding summer playground.

Section a. MACKINAW CITY to BAY CITY; 249 m. US 23.

MACKINAW CITY, 0 m. (593 alt., 875 pop.), the northern terminus of two arterial highways, at the uppermost tip of the Lower Peninsula, each summer is bright and busy and crowded with tourists, who swarm through the village on their way to the Upper Peninsula. Year-round ferries, crossing the Straits of Mackinac (pron. mack-i-naw) to St. Ignace (*see Tour 16a*), use the ornate dock maintained by the State. (*Car and driver, \$1 to \$1.50; passengers, 25¢; trailers, \$1 up. Schedule: winter, every three hours; spring and fall, every hour and a half; summer, every hour; special hunting season and holiday schedules to accommodate traffic.*)

Past the site of Mackinaw City went the Indians, the *coureurs de bois*, and the Jesuit missionaries on their trips between Lake Huron and Lake Michigan. Today, vessels going through the straits whistle their 'signatures' to the reporting service at the lighthouse, and pleasure boats and ferries ply from this port to Mackinac Island, Bois Blanc Island, and other points.

Here was one site of Fort Michilimackinac, a name applied without discrimination to forts successively built at St. Ignace, Mackinaw City, and Mackinac Island. The first Fort Michilimackinac (previously called De Buade), established in 1681 at St. Ignace by the French, was declared the military center of the northwest region in 1685, and remained so until 1701, when the commander, Antoine de la Mothe Cadillac, moved the garrison to Detroit. Michilimackinac was re-established in 1715 under Lignery, probably on the south side of the straits. Records are meager, but Fort Michilimackinac stood on the present site of Mackinaw City in 1760, when it was abandoned by the French after the capitulation of Canada. The British took it over in 1761.

The fort had been held by the English only a few years when 21 men of the garrison were killed and 17 captured by Indians in a massacre that was part of Pontiac's Conspiracy. The Indians were subsequently forced to terms, and the fort was reoccupied by the British in 1764. In 1780-81, the British moved the fort to Mackinac Island, which, in 1787, became the focal point of the Northwest Territory (*see Mackinac Island*).

The docks of the State Highway Department, several transportation companies, and various speedboat concerns that operate cruisers between the village and Mackinac Island are in the eastern section of the village. Because almost all automobile traffic entering the Upper Peninsula from lower Michigan passes through the Straits of Mackinac, the State highway department has long made plans for a bridge to connect the two peninsulas. Preliminary studies have established a cost estimate of \$32,000,000.

FORT MICHILIMACKINAC STATE PARK (*camp grounds, bathing beach*), containing the reconstructed stockade of the fort, is

at the terminus of US 31 near the northern edge of the village. The park contains a small zoo of native animals.

Mackinaw City is at a junction with US 31 (*see Tour 15a*).

CHEBOYGAN (Ind., place of entrance, portage, or harbor), 16 m. (608 alt., 4,923 pop.), on the river of that name near its opening into Lake Huron, was one of northern Michigan's most important lumbering centers in the late 1800's. Where the pine, maple, and birch once stood are rows of fruit trees or well-cultivated fields. Lakes and streams that once carried great drives of logs are bordered with cabins and summer cottages. Although the sawmills have long been dismantled, a pile of sawdust, 1,000 feet long, 600 feet wide, and 100 feet high, still stands at one end of the State Street bridge. For 60 years this refuse, ripped from millions of logs, accumulated on the site.

Somewhat quiescent during the winter, the city takes on a new tempo with the coming of summer. The streets carry a stream of cars from two arterial highways. For two months, stores are busy, cinema houses are crowded, service stations and garages hire more help, and the little shops selling needlework, Indian beads, or other knickknacks share the general prosperity. The city has factories that manufacture paper, wooden novelties, and snow plows. Forty-two tugs are licensed to fish from here, and large quantities of fish from Canadian waters are brought to this point for shipment.

The name Cheboygan undoubtedly refers to the river, which is the outlet for numerous streams and lakes, some of them forming a continuous waterway 40 miles inland. The INLAND WATERWAY, still used by pleasure boats, was completed in 1867 by construction of a canal and lock, making available a water route to Conway, on Crooked Lake, US 31 (*see Tour 15a*), and US 27 (*see Tour 12a*). It was an important transportation link when there were few roads.

During the summer there is steamship service between Cheboygan and St. Ignace, Mackinac Island, and Les Cheneaux Islands. Cheboygan is at a junction with US 27 (*see Tour 12a*), with which US 23 is united for four miles.

Right from Cheboygan on County 19 (Lincoln Avenue) to the UNIVERSITY OF MICHIGAN BIOLOGICAL STATION (*adm. by special permission; Visitors' Day is in early August*), 13 m. (*road marked by signs*), on Douglas Lake. The station consists of 100 buildings on a 30-acre tract of lakes and cut-over land, in the University's larger forested area of 3,000 acres. Its purpose, since its origin in 1909, has been to facilitate field work in botany and zoology for selected groups of students.

For a few miles south of Cheboygan, US 23 follows the Cheboygan River, the winding curves of the road affording splendid views of stream and country. Both the Cheboygan and the Black River, a branch that flows from Black Lake about 15 miles inland from Cheboygan, are good fishing waters for walleyed pike.

At 27 m. is a junction with State 212.

Right on State 212 is ALOHA, 1 *m.*, a small resort with three year-round families. ALOHA STATE PARK, on Mullett Lake (*see Tour 12a*), 35 acres of woodland, is fully equipped for campers.

ONAWAY (Ind., awake), 47 *m.* (800 alt., 1,492 pop.), a resort center with bright shops and restaurants, was founded in 1881 as Shaw Post Office. When the city's large wood-rim plant was destroyed by fire in 1926, the citizens turned to the tourist trade for revenue.

Left from Onaway on State 211 to ONAWAY STATE PARK (*all facilities*), 5 *m.*, 150 acres of wooded land on 10,000-acre BLACK LAKE (*muskellunge and sturgeon*). The shore is bounded in some places by dense hardwoods; in others, the land is flat and swampy. Along parts of the lake shore are low, sandy hills. On the south shore, at Bonz Landing, is the remnant of one of the earliest limestone quarries in northern Michigan. Black Lake was a waterway for timber during logging operations on the Black and Rainy Rivers.

At the entrance to Onaway State Park is a junction with County 489; R. to a junction with County 646, 10.5 *m.*; R. here to OCQUEOC LAKE, 16 *m.* (*follow signs*), unusual among Michigan lakes for its fine rainbow-trout fishing during early summer. There are also pike, bass, perch, and other pan varieties. On the eastern shore is a resort development (*boats, cabins, and camping facilities*). Canoe trips on Ocqueoc Lake and connecting waters pass through wild, sparsely settled country.

Left (*east*) from Ocqueoc Lake on a graveled road that becomes State 91 to a junction with a side road, 17 *m.*, over which the route continues L. to HAMMOND, 20.5 *m.* (39 pop.), a tiny fishing village on Hammond Bay and the site of the HAMMOND COAST GUARD STATION, established in 1878. Eastward the route runs along the lakeshore, rejoins State 91 at 21.5 *m.*, and skirts EVERGREEN BEACH, 24.5 *m.*, a wooded valley of pine and cedar, between the road and the water.

Ahead, State 91 passes FORTY MILE LIGHTHOUSE (*open*), 27 *m.* (L), established in 1896 and so named because it is 40 miles from the Straits of Mackinac. The light is 66 feet above the water. P. F. HOEFT STATE PARK (*camping and bathing facilities*), 29 *m.*, embraces 300 acres of woodland and beach on Lake Huron. In Rogers City, 34 *m.*, is the junction with US 23 (*see below*).

The OCQUEOC RIVER (Ind., sacred water) is crossed at 59 *m.* At its mouth, a few miles northward on Hammond Bay, the Chippewa were accustomed to hold a tribal ceremony for the disposition of the crippled and aged. These unfortunates would rise voluntarily, at the height of the feasting, and plunge to their death in the clear waters of the river at the point where it enters Hammond Bay of Lake Huron. Such practices of self-destruction were not uncommon among the American Indians. The OCQUEOC DAM (R), long since fallen into disuse, was used in lumbering days to flood logs through the OCQUEOC RAPIDS (L).

ROGERS CITY, 72 *m.* (655 alt., 3,278 pop.), seat of Presque Isle County, is a quiet community on Lake Huron. In the adjacent port of Calcite, large shipments of limestone quarried near the village are prepared and loaded into lake freighters. Fishing and the manufacture of cedar products contribute a small share to the community's income. In Rogers City is the junction with State 91 (*see above*).

At 81.5 *m.*, in the village of LISKE, is a junction with County 638.

Left on this graveled road, which winds through thick second-growth hardwoods, to a junction with County 405, 13 *m.*; R. to PRESQUE ISLE HARBOR, 13.5

m., formed by the mainland and a strip of land, a half-mile long and equally wide, jutting into Lake Huron. The first dock was built in 1841, when the harbor was called Burnham's Bay. It was a busy place, the surrounding woods echoing with the thud of the ax and the crash of trees. The only touch with the outside world was by means of the freighters entering the harbor to take on wood for fuel. Today it is quiet, and the vessels are the pleasure craft that anchor here and the power boats whose occupants troll the blue waters for lake trout. A modern resort has replaced the old docks.

At the end of a well-defined, single-lane road through a cedar thicket are the REMAINS OF OLD PRESQUE ISLE LIGHTHOUSE, built in 1819, the second on the Great Lakes. The present PRESQUE ISLE LIGHTHOUSE (*open 2-4 Wed., Thurs., and Fri.*) was erected in 1870. Built in old-style masonry, its walls are 12 feet thick at the base, tapering to the top, which is 120 feet above high water. The platform under the light furnishes a vantage point from which to view the peculiar formation of Presque Isle Harbor.

Ahead (*south*) from Presque Isle Harbor on County 405 is PRESQUE ISLE, 16 *m.* (45 pop.), a post office and supply station for the entire resort. Southward, the road leads along the shores of GRAND LAKE, eight miles long and two miles wide, with 19 islands and many bays and headlands. With the exception of some limestone bluffs, the lake is bordered by heavy stands of pine, cedar, balsam, and hardwood. Sand beaches provide good swimming, and the fishing for bass, walleyed and great northern pike, bluegills, and perch is excellent.

LONG LAKE, 26 *m.*, notable for small-mouth black-bass fishing, is seven miles long and one mile wide. Cottages and cabins border its shores, and groves of cedar and hardwood form a surrounding wall. County 405, which becomes Long Lake Ave., ends in Alpena at a junction with US 23 (*see below*).

POSEN, 88 *m.* (800 alt., 219 pop.), a village grouped around St. Casimir's Roman Catholic Church and school, is the center of a Polish farming district. Described by Konrad Bercovici in his book, *On New Shores*, as a typical Polish settlement in the United States, its people still cling to some of the customs of their homeland. The village was settled about 1870, when a few hundred Polish immigrants were brought here by lumber companies. The timber was soon exhausted, and the Poles bought the cut-over land for \$6 to \$10 an acre and cleared it for farming. Preserving intact its Polish culture, the colony for years was the delight of ethnologists. Up to about the period of the first World War the everyday attire of the women was the national costume of Poland. Adjoining the church is a parochial school, the *Skola Kazemierska*. The language spoken is Polish, and all but one of the Sunday church services are in that tongue.

Fondness for social life is characteristic of the Polish people, and such events as marriages and christenings are celebrated in Posen in the traditional manner. Dinner for the wedding is provided by the father of the bride; the father of the groom supplies the wine and the musicians. Each male guest contributes to the bride's dowry in the ceremony of 'breaking the plate': A china plate is placed on a table in the room where the general dancing is in progress; money is thrown on the plate by the guests, and the bride dances with each donor for a specified time; when silver is thrown hard enough to break the plate, the bride dances twice with the thrower. Marriage festivals often continue three days and three nights.

At 94 *m.* is a junction with a side road.

Right on this road to a junction with a graveled road, at a large SINKHOLE (L), 1 m.; R. to a junction with an earth road, 2 m.

1. Right on the earth road 1 m. to the F. W. FLETCHER STATE PARK (*camping facilities*), 160 acres of virgin timber. The outstanding feature here is SUNKEN LAKE, a sinkhole, which in logging days was full only during spring rains, when Thunder Bay River was a torrent. During dry weather the water drained through a hole in the bottom, near the west end. To prevent the drainage, the loggers built a dam in the center of the lake. Sinkholes, averaging 200 feet across and 150 feet in depth, are common in this area.

2. Left on the earth road 1 m. to LEER (100 pop.), populated mostly by Norwegians and named for Leer, Norway. It is the center of a farming area in which fine Guernsey cattle are bred. A favorite supper dish of the inhabitants is *Flode Grode*, which consists of sweet milk or cream, boiled until it becomes thick, then cooled and served with melted butter, sugar, and a dash of cinnamon.

At 103.5 m. is a junction with State 32.

Right on State 32 to HILLMAN, 10 m. (800 alt., 289 pop.), a village near enough to six lakes and two branches of the Thunder Bay River to be popular with fishermen in summer; in fall, many deer hunters establish headquarters here. A large number of private hunting clubs are in this area.

ALPENA, 117 m. (587 alt., 12,166 pop.), on Thunder Bay, is the largest community north of Bay City on the Lake Huron shore. Alpena Township, when surveyed in 1839, was offered to anyone in the survey party in lieu of summer wages, but the area of desolate cedar swamp was not wanted. In 1853, a portion of the land along the river was surveyed for a village plat. One year later, the first white settler, Daniel Carter, arrived with his wife and daughter, and built a log house. In 1857, G. N. Fletcher built a store and boarding house, and in 1859 the first steam sawmill in the county was started here.

At one time there were 20 lumber and shingle mills in Alpena, as well as a flour mill, two tanneries, and an excelsior plant. In 1903, limestone quarrying was begun. Many of the industries have disappeared, but the cement plant, pulp mill, and limestone quarries have survived and prospered. The city has a total of 20 industrial establishments, employing 2,000 workers.

At the southern city limits is MICHEKEWIS PARK, with a municipal beach and camping ground on Thunder Bay. The park is the center for city-sponsored summer events and the Alpena Winter Carnival, held annually in January.

1. Left (*north*) from Alpena on Long Lake Ave., which becomes County 405, past Long Lake, Grand Lake, and Presque Isle, is an alternate route, which rejoins US 23 in the village of Liske (*see above*).

2. Left from Alpena on Ford Avenue is a junction with a graveled road, 1.5 m.; L. to the HURON PORTLAND CEMENT COMPANY QUARRY (R), 2.5 m., an open-pit limestone quarry, a mile long, half a mile wide, and 110 feet deep. The rock is carried to the crushers over a network of tracks, and electrically controlled cars are handled from a central tower. Adjacent is the THUNDER BAY QUARRY (L).

At 2 m. Ford Avenue becomes a graveled road; at 3 m. is the junction with an earth road (*impassable during wet weather*): L. to MISERY BAY, 7 m., an in-

dentation in the Lake Huron shore, so called because of a legend that the unsounded bottom of the black waters never gives up its dead. The bay is really a channel, 100 feet to 1,000 feet wide, that meanders one mile inland to a deep hole. The water in the hole is often agitated by an underground force, and it never freezes, despite the extreme cold of this latitude. It is believed to be an outlet of the underground river that drains the Alpena County sinkholes and Sunken Lake in Fletcher State Park.

South of Alpena, at 128 *m.*, is a junction with a side road.

Left on this road to OSSINEKE, 1 *m.* (100 pop.), on the Lake Huron shore at the mouth of Devil River, a fishing village with a small rustic-furniture plant and a fish-box factory. The name, an adaptation of the Indian word *wawsineke* (image stones), was chosen because two large stones, worshipped by the Indians, stood on the site of the village in 1839. Around them was woven the legend of Chief Shingabaw, who had told his people that his spirit would come back after death to the place of the *wawsineke*. Hostile tribesmen seized the image stones and, loading them into a canoe, together with several captives, started to cross Thunder Bay. This outrage against the gods caused the waters to boil, and the raiders were drowned. When the captives returned to shore, they found the stones in their former places. A fisherman, however, used the stones as anchors for his nets, and they now rest at the bottom of Lake Huron. On the shore of Thunder Bay is OSSINEKE COUNTY PARK (*camping*).

At 133.5 *m.* is a junction with an earth road.

Right to 6,840-acre HUBBARD LAKE, 9 *m.*, the source of Thunder Bay River. The shore line varies from marshy to densely wooded highland, and the beaches are sandy. There is a large resort development, fishing is good, and adjacent areas furnish small-game and deer hunting.

At 147.5 *m.* is a junction with a side road.

Left on this road to STURGEON POINT, 2.5 *m.*, where a U. S. COAST GUARD STATION (*open by permission*), established in 1869, supervises the adjoining electrically operated STURGEON POINT LIGHTHOUSE (*open; guides furnished at station*). The lens is 69 feet above Lake Huron.

HARRISVILLE, 150 *m.* (600 alt., 438 pop.), seat of Alcona County, is the home of one of the two newspapers published in the county. It is an attractive little fishing village, popular during summer. HARRISVILLE STATE PARK (*all facilities*) consists of 12 densely wooded acres on Lake Huron south of Harrisville.

GREENBUSH, 155 *m.* (150 pop.), is a resort village on the shore of Lake Huron.

CEDAR LAKE (R), 162 *m.*, covers an area of 1,000 acres. Almost entirely fringed with cedar trees, yet visible from the highway, it is a splendid fishing ground and a popular resort.

VAN ETTAN LAKE (R), 164.5 *m.*, four miles long, has one island, in the center of its 1,320 acres of water. The sand beaches are excellent for bathing, and the lake is popular because of its bass and pike fishing.

At 166 *m.* is a junction with State 171.

Right on State 171 to CAMP SKEEL (L), 2 *m.*, aerial gunnery and bombing range of the First Pursuit Group, U. S. Army Air Corps.

CAMP NISSOKONE (R), 35 m., hidden from view by the trees, is a summer camp for boys, under the direction of the Detroit Y.M.C.A. Its buildings, accommodating 90 boys, are near the shore of Van Ettan Lake.

OSCODA, 167 m. (600 pop.), is at the mouth of the AU SABLE RIVER, famed as a trout stream and navigable by canoe as far as Roscommon (*see Tour 12a*). Oscoda, with the village of Au Sable across the river, played a prominent part in the early pine-lumbering days. It grew rapidly, while the logs were coming out, to a population of 3,593 in 1890, and shrunk with the stemming of that tide. A fire in 1911, which practically wiped out Au Sable, was almost as disastrous for Oscoda. Today it is a resort village, popular because of the river; its only industry is fishing. A RECREATION CENTER (*tennis courts, bathhouse, sand beaches*) is on Lake Huron.

Right from Oscoda on the Au Sable Drive, a graveled road, is a plains country. Here for great stretches the sandy soil grows only a few scrub oak and dwarf pine, fires that swept in rapid succession across the land, following removal of the pine, burned out most of the humus in the soil. Occasional plantings of pine, stretching in even rows across the hills, indicate attempts at reforestation. The program is advancing rapidly, especially within the boundaries of the HURON NATIONAL FOREST.

The LUMBERMEN'S MEMORIAL (R), 155 m., on a high bluff overlooking the Au Sable River, was modeled by Robert Aitken of New York and donated by 73 descendants of pioneer lumbermen of Michigan. On a granite base weighing 20 tons are three figures in bronze—the riverman, with his peavy in hand; the landlocker consulting his map; and the woodman, with his ax and crosscut saw. Near what was an old logging tote road (the Thompson Trail), the three heroic figures look out over a land once dense with timber.

IARGO SPRING (R), 185 m., is a natural flow of sparkling cold water emerging from the side of a hill. The spring, reached by descending a long flight of wooden steps, is in a shady, quiet ravine on the bank of the Au Sable River.

At 195 m. is a junction with State 65; L on State 65 to HALE, 31 m. (250 pop.), a small farming community in an area that contains more than 100 lakes and the headwaters of Au Gres River. Long and Loon Lakes, two of the larger ones in the district, have been well developed by resorters.

AU SABLE, 167.5 m. (61 pop.), on the south side of the river from Oscoda, in 1890 counted a population of 4,328.

Between Au Sable and Tawas, the route is through typical cut-over land that once was covered with virgin pine (*danger; deer on the highway*) and now furnishes nourishment only for second-growth oak, pine, and poplar. For years after the decline of the lumber industry, picking huckleberries was one of the chief local occupations. Observing that these berries often grew in the wake of fires, residents deliberately set many of the fires that roared across the country. Extensive educational campaigns launched by the State department of conservation have taught those living in such areas the value of timber coverage in preserving the wild life of the woods, the fish in the streams, and the beauty of the country.

EAST TAWAS, 182 m. (588 alt., 1,455 pop.), is one of twin cities at the mouth of Tawas River on Tawas Bay, an indentation formed by a strip of land extending crookedly into Lake Huron. Tawas is a derivative of Otawas, the name of a locally important Chippewa chief.

The early history of the two communities is inseparable from that of the lumber industry. Both owe a degree of present prosperity to the tourist business, though in East Tawas are the shops of the Detroit and Mackinac Railroad, each employing a considerable number of men; both also benefit from the gypsum that has been taken from this district since 1861.

THE BEALS NURSERY (*open by permission*), on the southwestern edge of East Tawas, is operated by the U. S. Forest Service; 10,000,000 trees are grown here annually. The 16-acre EAST TAWAS STATE PARK (*camp sites, equipment*), one of the first established by the State, is on the shore of Tawas Bay (L). From August 1 to 15, a water regatta is held on the bay, opposite the park.

TAWAS CITY, 184 *m.* (587 alt., 1,034 pop.), devotes almost its entire attention to tourists. In 1936, businessmen and sportsmen of Tawas City and East Tawas originated the Tawas City Perch Festival (*Fri. through Sun. in April perch spawning season*), to exploit the popularity of perch fishing at the mouth of the Tawas River and along the Huron shore. The week-end festival in 1938 attracted 15,000 visitors.

ALABASTER, 190 *m.* (400 pop.), where deep gashes in the earth mark a huge gypsum quarry, is the shipping port of the U. S. Gypsum Company. The area in which the gypsum mine is located was first purchased for \$50, a dog, and a gun; and afterwards was sold for \$10,000. Plaster was made here from 1870 until the present dock was built; the raw material is now conveyed elsewhere.

AU GRES, 204 *m.* (589 alt., 203 pop.), serves the cottagers on POINT AU GRES (L). Southward, US 23 veers away from the lake through a flat country.

OMER, 212.5 *m.* (620 alt., 216 pop.), settled in 1873 and incorporated as a city in 1903, is on the Rifle River. Nightly, about the middle of May, the river reflects the glare of torches, lanterns, and bonfires, while fishermen, using large dip nets, take huge catches of suckers running the river to spawn. The fish are shipped alive to the Jewish markets of Detroit. The Rifle and its tributaries offer trout fishing in their upper reaches.

STANDISH, 220 *m.* (623 alt., 803 pop.), is a shipping and trading center for a farming area that concentrates mostly on sugar-beet production and dairying. There are a creamery, a flour mill, a milk condensery, and a grain elevator. During the hunting season, it is headquarters of the duck hunters who shoot along Saginaw Bay, seven miles distant.

Right from Standish on State 76, the connecting link between US 23 and US 27 (*see Tour 12a*), is ROSCOMMON, 59 *m.* (1,123 alt., 412 pop.) (*see Tour 12a*).

PINCONNING (from Opinnicconing; Ind., place of the potato), 229 *m.* (598 alt., 826 pop.), is on the Pinconning River, shown on many old maps as the Potato River. Settled in 1866, the community

was an important rail center in logging days. Today, it is a trading center in an area raising sugar beets, chicory, and beans; dairy farming is also increasingly important. Its main occupations are packing, chicory preparation, and cheese making.

KAWKAWLIN (Ind., pickerel), 244 *m.* (250 pop.), is a relic of the lumber period; a few dwellings and an elevator are half-encircled by the Kawkawlin River, down which logs were floated to the mills at Bay City.

BAY CITY, 249 *m.* (604 alt., 47,355 pop.) (*see Bay City*).

Bay City is at a junction with State 25 (*see Tour 10a*).

Left (*north*) from Bay City on State 111 (N. Henry St.) to the BAY CITY STATE PARK (400 *camp sites*), 4.5 *m.*, the most popular summer playground in the Saginaw Valley. The 200 acres on Saginaw Bay include a fine sand beach, a bathhouse (*locker 10¢, towel 5¢, swim suit 15¢*), and, near by, an elaborate dance hall and various carnival concessions. In the park is the BAY CITY STATE FISH HATCHERY, established in 1923 to aid the propagation of walleyed pike, known to the fishing trade as yellow pickerel. The annual spring spawning run of pickerel in Saginaw Bay has always been a bonanza for commercial fishermen; fearful of depleting the run, fishermen and the State department of conservation co-operate in a campaign whereby the fishermen strip the eggs from female pike taken in their nets and turn them over to the department for hatching and replanting.

Section b. BAY CITY to OHIO LINE; 149 m. US 23.

Between BAY CITY, 0 *m.*, and Saginaw, US 23, known locally as the River Road, follows the Saginaw River through an area that was once an extensive marsh. Between Saginaw and Flint, one of the important automotive cities of the State, is a fertile farming district noted for its production of sugar beets. Southward from Flint are the lands long ago denuded of timber, whose wounds, unlike the cut-over areas of the north country, have been hidden by the development of agriculture. Ann Arbor, home of the University of Michigan, adds the chapter of cultural progress.

The JAMES CLEMENTS AIRPORT (R), 4 *m.*, includes, in addition to the hangar, the imposing three-story brick ADMINISTRATION BUILDING (R), a gift of the late William L. Clements, donor of the Clements Library of American history at the University of Michigan (*see Ann Arbor*).

Between CHEBOYGANING CREEK, 5 *m.*, and Saginaw, the 'made' land between the highway and the SAGINAW RIVER has been converted into a roadside park, the VETERANS MEMORIAL PARKWAY (R). Reforestation has added to the natural growths of bushes and shade trees here, and considerable perch fishing is carried on in the river, some from the houseboats—not uncommon habitations—that are moored to the banks. The river is navigable as far as Saginaw, and long lake freighters carrying coal, oil, and limestone frequently ply a careful passage along the narrow channel. Most of the land between the highway and the river has been built up with hydraulic fill from the river bottom.

SAGINAW, 13 *m.* (593 alt., 80,715 pop.) (*see Saginaw*).

Saginaw is at a junction with State 46 (*see Tour 7a*) and US 10 (*see Tour 5a*), with which US 23 is united for 23 miles.

BRIDGEPORT, 19.5 *m.* (350 pop.), named for the numerous bridges that crossed the Cass River here, manufactured salt and shingles in its pioneer days. Now the population is composed largely of farmers and workers employed in Saginaw.

At 22.5 *m.* is a junction with State 38.

Left on State 38 to a junction with State 83, 5 *m.*; R. here to FRANKENMUTH (Ger., courage of the Franconians), 5.5 *m.* (603 alt., 925 pop.), a German settlement known throughout the State for its chicken dinners, served harvester style, and its Frankenmuth beer. It was settled in 1845 by a group of Franconians from Bavaria and, later, by refugees from the unsuccessful German revolution of 1848. The neat village, spread out for some distance, has retained its German flavor, most of the inhabitants are descendants of the original settlers and speak the German language.

US 10 crosses the CASS RIVER, 23 *m.*, a wide, deep stream overhung with trees, named for Michigan's first territorial governor, Lewis Cass.

At 26.5 *m.* is a junction with a county road.

Right on this road is BIRCH RUN, 1.5 *m.* (600 pop.), in the center of a bean-raising area. In 1925, oil drilling began, and 200 barrels of petroleum were produced weekly from the township's 15 wells.

At 36 *m.* is the southern junction with US 10 (*see Tour 5a*).

MOUNT MORRIS, 38 *m.* (777 alt., 1,982 pop.), is virtually a suburb of Flint. Its working population is employed mainly in the industrial plants there.

FLINT, 45 *m.* (780 alt., 156,492 pop.) (*see Flint*).

Flint is at a junction with State 21 (*see Tour 6*) and US 10 (*see Tour 5a*).

FENTON, 62 *m.* (717 alt., 3,171 pop.), bases its prosperity on the manufacture of cement—a process that utilizes marl taken from the many surrounding lakes—and the trade of summer resorters who visit these waters. Here is the 12-room MICELESS HOUSE, at Shiawassee and Adelaide Sts., built in 1890 by a man who had a great aversion to field mice. Its solid walls are so constructed as to eliminate completely any spaces in which mice might scamper. The builder of this house donated to the city the FENTON LIBRARY, on LeRoy St., where is kept the PINE PLAT BOARD, on which the village was platted in 1837.

Left from Fenton on State 87 is HOLLY, 5 *m.* (980 alt., 2,252 pop.), a small industrial city with some regional fame as a flower center. Flower gardening, encouraged by the Holly Flower Lovers' Club, is a feature of the civic program. The ADELPHIAN ACADEMY, on Oakland St., is a Seventh-Day Adventist school.

HARTLAND, 72 *m.* (200 pop.), has been developed into a cultural center by the son of one of its founders, who has created a series of foundations with a contribution of half-a-million dollars. The first of

these was the School Foundation, which contributes funds to 14 schools in the district. Other projects already developed are the CROMAINE LIBRARY (L) and the CROMAINE CRAFTS HIGHWAY SHOP (R), which provides training in basketry, weaving, wood carving, and art metal work. Musical training is given at the HARTLAND MUSIC HALL (R), the auditorium of which seats 400; its unusually fine equipment includes a pipe organ and an amplifying system over which programs can be sent to the entire town.

At 73.5 *m.* is a junction with a side road.

Right on this road to WALDEN WOODS, 0.5 *m.*, a 500-acre tract on WALDEN LAKE, given as part of the Hartland project to the Michigan Council of Religious Education for a summer Bible school. Dormitories have been provided, and a clubhouse for religious activities

At 80 *m.* is a junction with US 16 (*see Tour 4a*).

WHITMORE LAKE, 87 *m.* (575 pop.), on a lake of the same name, is a resort community of relatively recent origin, popular with residents of both Michigan and Ohio. Fishing and swimming are excellent.

ANN ARBOR, 97 *m.* (802 alt., 26,944 pop.) (*see Ann Arbor*).

Ann Arbor is at a junction with US 12 (*see Tour 2a*).

At 104 *m.* is a junction with US 112 (*see Tour 1*).

The UNITED STATES DETENTION FARM (L), 112 *m.*, for prisoners convicted of Federal offenses, covers 196 acres of good farmland.

MILAN, 113 *m.* (693 alt., 1,947 pop.), is a small, thriving industrial village in a fine farming district. The principal industrial units here are a furnace manufactory and a Ford parts plant.

DUNDEE, 123 *m.* (665 alt., 1,364 pop.), serves a long-settled, prosperous farm community.

US 23 crosses the OHIO LINE, 149 *m.*, 4 miles north of Toledo, Ohio.

Tour 12

Cheboygan—Grayling—Clare—Lansing—Coldwater—(Angola, Ind.); US 27.

Cheboygan to Indiana Line, 320.5 *m.*

Roadbed hard-surfaced throughout.

Michigan Central R.R. parallels route between Cheboygan and Roscommon; Pere Marquette Ry. between Harrison and Clare; Ann Arbor R.R. between Clare and Ithaca, Grand Trunk R.R. between Lansing and Charlotte.

Accommodations at short intervals.

Section a. CHEBOYGAN to CLARE; 153 m. US 27.

The panorama of Michigan's vacation land at its best unfolds along US 27, the cool beauty of fresh-water lakes and vistas of gently rolling country. The land, once covered with Michigan pine, was denuded by the lumbermen in the latter half of the nineteenth century; fires completed the destruction, but fire suppression in recent years and a comprehensive program of reforestation have effaced the worst of the scars.

CHEBOYGAN, 0 m. (608 alt., 4,923 pop.) (*see Tour 11a*), is at a junction with US 23 (*see Tour 11a*), with which US 27 is united for four miles (*see Tour 11a*).

South of Cheboygan US 27 passes the upper tip of MULLETT LAKE (L), 6 m., second largest of Michigan's inland waters, with 44 miles of shore line and a maximum depth of 145 feet. Summer residents have colonized the western shore extensively with small cottages; along the eastern side are scattered settlements and the Aloha State Park (*see Tour 11a*). Beaches are excellent; most have sandy bottoms. As there are few extensive weed beds and little shoal water, motorboats, cabin cruisers, and small sailing craft are numerous. Mullett Lake, classed as navigable water and hence under the jurisdiction of the War Department, is part of the 40-mile Inland Waterway Route, US 31 (*see Tour 15a*) and US 23 (*see Tour 11a*).

At 7.5 m. is a junction with a side road.

Left on this road is the village of MULLETT LAKE, 0.5 m. (50 pop.), a vacationists' trading post (*supplies, boat livery, fishing equipment*). The village and lake were named for the original surveyor of Cheboygan County, whose name ended with a double *t*; this spelling is retained in the name of the lake, but the Post Office Department has adopted the shorter form for the name of the village—to the annoyance of the villagers.

US 27, bordering the western shore of the lake, passes several small communities scarcely distinguishable from each other, all of which are deserted in winter.

TOPINABEE, 14 m. (121 pop.), during the summer season gathers the largest colony on Mullett Lake (*hotels, bathing beaches, camps*). The village, on a steep, hilly site, was founded in 1881 at the behest of railroad officials who were anxious to see a resort here. The hotel operator who platted the village named it for the Potawatomi chief who concluded the treaty giving the white man the site of Fort Dearborn, now Chicago. Unlike many northern Michigan communities, Topinabee was never greatly concerned with lumbering, and so escaped the struggles of a post-lumbering existence.

INDIAN RIVER, 20 m. (300 pop.), on the Indian and Sturgeon Rivers, is in a popular summer recreational area. The Sturgeon, a beautiful fast-flowing stream, is well-stocked with trout.

BURT LAKE STATE PARK (*camping and fishing*), 21 m., occupies 192 wooded acres on the southern shore of BURT LAKE, which is extensively developed. Southward, US 27 ascends a slight grade

through a lightly forested country, in which the villages are maintained principally by summer vacationists and hunters during the fall. Deer, birds, and ruffed grouse are plentiful, and bear and bobcat are occasionally encountered.

WOLVERINE, 30.5 *m.* (780 alt., 300 pop.), was named for the animal that gave Michigan its nickname. Settled as a typical sawmill center, it owes its continued existence to the surrounding resorts and fishing waters. South of the village, beginning at 32 *m.*, is a roadside development that includes a **MINIATURE FALLS (R)**, artificially created of swamp spring water; rustic bridges over the West Branch of the Sturgeon River (R); and a **LOG BELVEDERE (L)**, on the side of a hill about 200 yards from the highway, offering a wide view of the surrounding hills and valleys. Along this stretch of the river many stream improvement devices have been installed by the department of conservation.

VANDERBILT, 41.5 *m.* (1,300 alt., 456 pop.), founded in 1870 and incorporated in 1901, was named for the prominent Eastern family. Of the many mills once situated here, only two portable sawmills are now operating, and the village depends upon fishing and hunting for its existence. Trout, prairie chicken, ruffed grouse, rabbit, and deer abound.

Left from Vanderbilt on an earth road known as the Elk Trail to the **PIGEON RIVER STATE FOREST**, 9 *m.*, a game refuge interlaced with driving and hiking trails. At 13 *m.* is the **FOREST HEADQUARTERS** (*information on forest trails*). A large herd of wild elk, imported by the State department of conservation and protected against hunters, is most often seen at dusk or dawn. There are many deep and unusual sinkholes in this section, averaging 12 acres in extent, which were at one time level with the surrounding ground. A few are dry; others are deep, with cold, clear spring water that contains large rainbow and speckled trout. One sinkhole, called Ford Lake, is known as the only grayling lake in Michigan. Trout and Montana grayling were planted in these depressions as an experiment. Known by such names as Devil's Soup Bowl and Paul Bunyan's Punch Bowl, these steep-sided pits have no surface outlets.

South of Vanderbilt, the highway follows a winding course over the hills of Otsego County.

The **NORTHERN MICHIGAN STATE TUBERCULOSIS SANATORIUM (L)**, 48.5 *m.*, a three-story brick building, is set back from the road on a hill that rises slightly above the level of Gaylord. The sanatorium, built in 1936-7 under a PWA grant, accommodates 150 patients.

GAYLORD, 50 *m.* (1,350 alt., 1,627 pop.), seat of Otsego County, is one of the most modern cities in the upper part of the State, with excellent stores and wide, well-lighted streets. Near the northern limits of the city are the low white buildings of **CAMP GAY-GUG-LUN (R)**. The camp was constructed in 1930 by Michigan State College, utilizing a legislative appropriation, on land donated by Gaylord and Otsego County; it is the summer home of 4-H Clubs in the northern section of the Lower Peninsula. The buildings are also used by local organizations. The **GAYLORD MUNICIPAL BUILDING**, downtown, houses a public library and an auditorium seating 520. Surrounding Gaylord is an

important potato-producing district; the harvest in 1935 totaled 404,532 bushels, produced on one-fifth of the crop land of the county.

Left from Gaylord on State 32 to a junction with an earth road, 13 m.; L. here to the junction with a similar road, 15 m.; R. here to the DEARBORN COLONY (L), 16 m., a 'back to the land' movement begun in 1932 by six families from Dearborn. During the depression, these families were aided by that city in obtaining land on a homesteading basis. Guaranteed their food for the first year and given the right to purchase the land within five years, the homesteaders in four years developed a prosperous farming and dairying community. All of the men were farm-trained and prepared to undertake such pioneer tasks as building cabins, 'stumping' the land, and sinking wells on their 160-acre tracts. There have been hardships, and at times some of the colonists had to find outside employment to tide them over, but the consensus of opinion is that 'it has been worthwhile' The Farm Security Administration, following the success of the enterprise, has planned to settle 50 more families here, offering aid in moving and establishing them in the new surroundings.

ARBUTUS BEACH, 56 m. (50 pop.), a small resort on the eastern shore of OTSEGO LAKE, has a special appeal in the springtime, when the surrounding woodlands are covered with fragrant trailing arbutus. The lake, 1,700 acres in extent, has excellent beaches. The GILLET COLLECTION OF OLD LETTERS AND DOCUMENTS, some of merely local importance, some written by such eminent persons as John Wesley and H. A. Rogers, is housed in the general store of La Verne Gillett. Among the collection are copies of early game laws.

The OTSEGO LAKE STATE PARK (R), 57 m., is equipped with a store, a large new bathhouse, and all camping facilities (*no fee for use of equipment*). CCC workers recently added 1,200 native shrubs and trees to the park. Countless drives lead from this point to other lakes and to abandoned lumber camps. Seasonal visitors number about 32,000, and campers nearly 4,000.

OTSEGO LAKE VILLAGE, 57.5 m. (50 pop.), once a lumbering center and seat of Otsego County, is now a shopping village for vacation colonies. The old courthouse has been converted into a hotel.

Right from Otsego Lake Village on County 618, along the southern tip of Otsego Lake, to a junction with an improved road, 05 m.; R. here, following the western shore, to OTSEGO COUNTY PARK (*bathhouses, stoves, fireplaces, fishing, swimming, and boating*), 4.5 m.

WATERS, 60.5 m. (80 pop.), formerly Bradford Lake, was founded in 1871 as a logging center. In 1916, Henry Stephens, one of the last lumbermen of the vicinity, built the BOTTLE FENCE (L) that parallels the highway in two sections near the center of the village. About four feet high and 200 feet long, this brick and concrete structure is studded with approximately 15,000 wine, whiskey, and beer bottles. The builder bought the bottles from children, at 3¢ to 5¢ each, and many of them he threw away in order that they might be found again and resold to him. There are also three flower pots, six feet in diameter, likewise decorated with bottles. The basement of the Stephens house (L) contains a room completely lined with bottle caps in mosaic pat-

terns, with the names of Stephens's lumberman contemporaries worked into the design.

Right of the highway at 61 *m.* are LITTLE BRADFORD and BIG BRADFORD LAKES. The small lake offers good fishing, and the big lake is interesting for the salvage operations of 1935-6, by which pine, hemlock, and hardwood logs, still sound, were reclaimed from the marl bottom to which they had sunk during the log drives of the 1880's. After they had been extracted with huge tongs at the end of a 200-foot manila line, the logs were milled in the neighborhood.

FREDERIC, 68.5 *m.* (75 pop.), has a few houses, a general store, and a hotel.

1. Right from Frederic on County 612 to the Middle Branch of the Au Sable River, 1 *m.*, known for its plentiful trout.

2. Left from Frederic on County 612 to a junction with State 93, 5.5 *m.*; R. on State 93 to the HARTWICK PINES STATE PARK, 9 *m.*, containing, within its 12,000 acres an 85-acre tract of virgin white pine. Three miles of foot trails and 40 miles of roadway lead from the administration building, through large areas of second-growth forest, to the banks of the Au Sable River and the pine grove. The largest of these trees reaches a height of 150 feet and is 13 feet in circumference at its base. Two logging-camp buildings, each 70 feet long, have been constructed of pine logs to serve as museums of lumber-day relics. Near the headquarters is a ten-acre camp ground.

GRAYLING, 77.5 *m.* (1,146 alt., 1,973 pop.), on the Middle Branch of the Au Sable River, is named for the nearly extinct Michigan grayling, until 1884 the only game fish inhabiting the upper Au Sable system. Grayling were caught by the thousands until, in the early 1880's, the species dwindled in numbers and soon virtually disappeared. The last straggler caught was reported many years ago. Pressure brought by early sportsmen resulted in an investigation by the Michigan Fish Commission; and, in 1884, the first plant of brook trout was made in the Au Sable at Frederic, nine miles north of Grayling, by Reuben S. Babbitt (1859-1932), a character beloved by outdoorsmen throughout Michigan. Years later, in 1905, the trout appeared at several points along the main stream and have steadily increased in number, until the Au Sable is known as the outstanding trout stream in the State. It is an interesting fact that the present species of fish are all foreign to the Au Sable's waters. The river is also the scene of the annual Grayling Canoe Carnival, an August week-end event. At the first canoe carnival in 1934, more than 100 canoes made a 50-mile trip on the river.

The GRAYLING STATE FISH HATCHERY (L) on the East Branch of the Au Sable River, was built in 1914 by a group of sportsmen and operated with the co-operation of the State department of conservation. The department bought the hatchery in 1926 and increased its capacity to an annual output of 3,000,000 trout fingerlings.

Right from Grayling on State 93 to the GRAYLING WINTER SPORTS PARK (L), 2 *m.*, bare in summer but carefully prepared for five types of winter sports during the snow season. Scene of the annual Grayling Winter Carnival (*late*

January), the park is also open throughout the season to winter sports enthusiasts. Here, during the carnival, a Winter Queen rules from an impressive ice throne. Trails following old logging roads are used as ski and snowshoe routes, and there are two ski jumps, toboggan slides, a bobsled trail, and two skating rinks.

On State 93 is the HANSON STATE MILITARY RESERVATION, 45 m., occupying 18,000 acres of level ground at the southern end of Lake Margrethe. The property was deeded to the State by the Hanson family, important lumber operators in the region, for the use of the Michigan National Guard, which has its summer training camp and maneuvers here. The reservation, on which the State has spent more than \$2,000,000, is one of the best-equipped National Guard camps in the United States.

Southward, US 27 traverses the HIGGINS STATE FOREST, where pine and young oak form thick walls on each side of the sandy shoulders. This territory has been extensively reforested.

ROSCOMMON, 94 m. (1,123 alt., 412 pop.), a small resort center, contained, during the lumbering epoch, one hotel and 14 saloons. Roscommon is known among vacationists as the starting point for a 300-mile canoe trip down the South Branch and along the main stream of the Au Sable River, terminating at Lake Huron (*canoes and guides available*).

1. Left from Roscommon on State 76, the connecting link between US 27 and US 23 (*see Tour 11A*), to ST. HELEN, 19 m. (125 pop.), in the midst of the extensive OGE MAW STATE FOREST. The village was settled in 1870 to accommodate 1,000 lumberjacks, between 1870 and 1900, more than \$50,000,000 worth of timber was taken from this area. Following the first World War, it became a market center for a summer colony established in the vicinity.

Southward through the Ogemaw Forest, many marked trails within reach of the highway lead past fire towers that offer wide views of wooded territory. At 24 m. State 76 turns eastward (L) through the Ogemaw Hills.

WEST BRANCH, 34 m. (953 alt., 1,164 pop.), is named for the west branch of the Rifle River that flows through its environs. Most of the early settlers came to farm, and this has remained the most important occupation. The recent discovery of oil in the vicinity has given rise to a flourishing petroleum industry. Since 1931, West Branch has become known for its annual Trout Festival, a three-day celebration marking the opening of the trout-fishing season during the last week-end in April. The first festival in 1931 drew 1,000 visitors, and in six years the affair came to attract 20,000 or more participants. The legislature in 1935 changed the State's trout season opening from May 1 to midnight of the last Friday in April, to accommodate the carnival.

Within a short distance of West Branch are twisting sand trails—once the routes of lumber operators—that lead through many lumber-camp sites and lost cities.

ALGER, 45.5 m. (500 pop.), was platted in 1884 by Russell A. Alger of Detroit. Once the terminal point of a narrow-gage railroad built between Alger and Alpena by a logging company, it was important in the movement of timber during the 1880's and 1890's. All that remains of the railroad is an occasional barely discernible stretch of roadbed, with some of the ties still in place.

STANDISH, 59 m. (623 alt., 803 pop.) (*see Tour 11A*), is at a junction with US 23 (*see Tour 11A*).

2. Right from Roscommon on County 531 to HIGGINS LAKE STATE PARK (*camping facilities*), 6 m. The Cut, which connects HIGGINS LAKE with Houghton Lake to the south, is a stream of unusual beauty, with a combination of marl bottom and limpid water. Higgins Lake is deep and clear, with high shores and broad, shaded, extremely hard beaches. Its shores are dotted

with summer homes. At the northern end of the lake is the Spanish War Veterans outing camp, CAMP CURNALIA, and the STATE FOREST NURSERY.

South of Roscommon, US 27 passes through rolling woodlands. The large and beautiful lakes here mark central Michigan's most popular vacation land.

At 96.5 *m.* is a junction with a graveled road.

Left on this road to the MICHIGAN FOREST FIRE EXPERIMENT STATION (*open daylight hours*), 0.5 *m.* Both Federal and State governments are represented on the staff of the station, concerned primarily with problems of preventing and handling forest fires.

US 27 passes the lobe of HOUGHTON LAKE (R) at 108.5 *m.* and, for the next seven miles, parallels its southern shore. Houghton Lake, the largest inland lake in the State, approximately 7 by 16 miles, is the source of the Muskegon River. The lake is a favorite waterfowl feeding ground, and its well-stocked waters attract many fishermen. Intensive resort developments line the entire southern shore. Each merges into the next, so that the aspect is of one long, narrow village.

PRUDENVILLE, 109.5 *m.* (100 pop.), aside from its tourist industry, is a meeting point for residents of a scattered farming territory.

Left from Prudenville on State 18 to the SITE OF MEREDITH (R), 10 *m.*, at the junction with an earth road. Once a lumber village of 1,800 population, Meredith is now an abandoned 40-acre tract, a few depressions in the ground mark the sites of buildings, and some wooden and stone markers still stand in the cemetery. Southward, State 18 leads to NORTH BRADLEY, 49 *m.* (119 pop.), at a junction with US 10 (*see Tour 5b*).

HOUGHTON LAKE VILLAGE, 115 *m.* (150 pop.), central part of the resort area, was originally active in lumbering and, later, in large-scale fishing. A ton or more of fish have been taken from the lake in one day by hook and line. Southward the highway passes through HOUGHTON LAKE STATE FOREST, the last great forest reserve along US 27. This is a sparsely inhabited territory in which dwellings are sometimes five miles apart.

HARRISON, 138 *m.* (1,200 alt., 458 pop.), the seat of Clare County, is the center of a resort area that provides excellent hunting and fishing. Numerous trails, some accessible by auto, others suitable for hiking only, lead to unfrequented lakes and to the sites of deserted logging camps. Harrison was chosen as the county seat in 1877, when the courthouse at Farwell—the first seat of Clare County—was destroyed by fire. To appease an outraged citizenry, who suspected it was the work of incendiaries desiring to establish the county seat elsewhere, the supervisors voted in 1878 to transfer the county seat from Farwell to 'near Budd Lake,' the exact center of the county, at that time a wilderness. The new city of nine square blocks was platted by the Pere Marquette Railway and named in honor of the ninth President of the United States.

BUDD LAKE (L), with several good bathing beaches, is within the city limits; and WILSON STATE PARK (*camp sites, water, electricity, store*) is on the shore of Budd Lake.

The highway makes an S curve across a branch of the Tobacco River, 141.5 m.; in a ravine (L) is the SPIKE HORN CREEK CAMP (*camping free*). A commercial enterprise, the camp is owned and managed by 'Spike Horn' Meyers, distinguished for his flowing white hair and beard. On a tract adjoining US 27 is the administration building, furnished entirely with handmade furniture and containing a collection of Indian relics and souvenirs. Directly behind the camp is a two-acre bear stockade where a dozen bear are kept, and in front of the stockade is a stone den in which they hibernate in winter. Near by is a group of four buildings and a wigwam where Indians live during the summer, making baskets, bows and arrows, and other items for the tourist trade.

At 143.5 m. is a junction with a graveled road.

Left on this road to a junction with an earth road, 2 m.; R. here to CORNWELL'S RANCH (*visitors permitted*), 2.5 m., 10,000 acres of gently rolling land, with lakes and woodlots scattered throughout its wide ranges. Originally purchased as a hunting ground and known as Tobacco River Ranch, the property has been converted into a cattle ranch on which, among other stock, a herd of about 3,000 Hereford steers is tended by several cowboys.

CLARE, 153 m. (838 alt., 1,491 pop.) (*see Tour 5b*), is at a junction with US 10 (*see Tour 5b*).

Section b. CLARE to LANSING; 88 m.

Between CLARE, 0 m., and Lansing the route is sharply differentiated from the cut-over lands to the north. In this region are the central Michigan gas and oil fields that have brought prosperity to areas which, previous to 1928, were sparsely settled agricultural neighborhoods or desolate stretches of abandoned land. South of the oil fields are placid farms, where sugar-beet cultivation ranks high.

In ROSEBUSH, 9 m. (400 pop.), the department store (L) at the crossroads houses the W. F. HUNTER COLLECTION OF RELICS, including 1,000 firearms, some of them 200 years old, and all in working order. The collection also includes many Indian artifacts.

MOUNT PLEASANT, 15 m. (765 alt., 5,211 pop.), despite its oil fields, is essentially a residential and college city. The population has almost tripled since 1930. Nevertheless, the city, for the most part, has avoided the undesirable effects of a boom. The Mount Pleasant Oil and Gas Exposition has been held biennially in August since 1935. The city originated as a trading post for 1,600 Indians, a number that has since dwindled to 300. These few usually hold their annual ceremonies, lasting a week, in the vicinity of Mount Pleasant.

The MICHIGAN STATE HOME AND TRAINING SCHOOL (*open 10-4 weekdays*), Harris and Pickard Sts., was opened in 1891 by the Government as the Mount Pleasant Indian School, but, by act of Congress

in February 1934, it was deeded to Michigan and came under the control of the Michigan Hospital Commission. The school provides vocational training for 310 feeble-minded children. The 55 Indian children formerly taught here were sent to their home districts throughout the State to attend public schools.

THE CENTRAL STATE TEACHERS COLLEGE CAMPUS, on South College Ave., is the center of the activities of a school founded in 1895 by the residents of the town. With an enrollment of 1,000 students, the college offers a four-year course in pedagogy, as well as extension courses for residents of the northern half of the Lower Peninsula. An annual high-school music festival sponsored by the college draws delegates from the entire State; the music department has also developed a group of madrigal singers who have attained eminence in the Midwest.

The level and gently rolling country between Mount Pleasant and Forest Hill is an agricultural and dairying district.

FOREST HILL, 31 m. (127 pop.), was settled by farmers, who, in order to utilize every foot of the rich soil, cleared away or burned the great hardwood forests that confronted them. Pine was the only timber then considered of commercial value. At Forest Hill, there is neither a forest nor a hill, the name applying to an older locality four miles away. The transfer was made when an improved roadway crossed the present site. The village has only one street, intersecting the highway, and the majority of its inhabitants have farms in their back yards. One mile west is the site of the 'Fake Railroad,' a grade one mile in length, begun, it is said, by 200 men working for Jim Ansley, who wished to bluff others into believing that the railroad would not come through Forest Hill unless certain agreements were met.

At 33 m. is a junction with State 46 (*see Tour 7b*), which unites with US 27 for four miles.

At 34 m. is a junction with US 27A.

Right on US 27A is ALMA, 2 m. (735 alt., 6,734 pop.), founded in 1853 and known chiefly as the home of Alma College. In the center of both oil and sugar-beet districts, Alma has one beet-sugar factory and three oil refineries. ALMA COLLEGE, a liberal arts school with a faculty of 24, was established in 1887 under the auspices of the Michigan Presbyterian Synod. It offers an excellent music course and an academic course leading to the A.B. degree. Among the several buildings on the 48-acre campus is a library that houses 45,000 volumes. In HOOD MUSEUM is a collection of geological specimens, including much of the famous WINCHELL COLLECTION made by Alexander Winchell, one of Michigan's outstanding geologists. Also on exhibition is a complete collection of Michigan birds and many Indian relics.

In the northern section of Alma is the MICHIGAN MASONIC HOME (L), maintained for the benefit of aged members of the order.

ST. LOUIS, 37 m. (740 alt., 2,494 pop.) (*see Tour 7b*), is at the eastern junction with State 46 (*see Tour 7b*).

ITHACA, 45 m. (734 alt., 1,780 pop.), center of a farming community, has recently benefited financially from oil drilling throughout the county. A conveniently equipped TOURIST PARK (R. on State 57);

in a wooded tract at the top of a hill, contains a MONUMENT TO THE OLD INDIAN TRAIL, now covered by US 27.

Old trees line the principal streets of ST. JOHNS, 68.5 *m.* (765 alt., 3,929 pop.), 'the best town except the town where you live,' according to a sign erected by the city. Farm implements and portable houses are manufactured here. Distinguished residents are two Chinese physicians, one a private practitioner, the other an X-ray specialist on the staff of St. Johns Hospital.

St. Johns is at a junction with State 21 (*see Tour 6b*).

LANSING, 88 *m.* (843 alt., 78,397 pop.) (*see Lansing*).

Lansing is at a junction with US 16 (*see Tour 4a*) and with US 127 (*see Tour 13a*).

Section c. LANSING to the INDIANA LINE; 79.5 m. US 27.

The section south of LANSING, 0 *m.*, was settled by agricultural pioneers who made their way from the eastern seaboard, following the opening of the Erie Canal in 1825. Farming and livestock breeding, most common activities in this area, give way gradually to recreational developments as the scene shifts to a land of lakes and streams.

POTTERVILLE, 13 *m.* (904 alt., 492 pop.), is the center of a district favorably known for its purebred sheep, cattle, and Percheron horses.

Right from Potterville one block on State 100 to the junction with a macadam road, L here to VERMONTVILLE, 15 *m.* (830 alt., 581 pop.), in the 'sugar bush' country, where great quantities of maple syrup and sugar are made. A sugar bush is a grove of sugar-maple trees. The town was colonized in 1836 by a group from Vermont, who came with plans already drawn for a definite form of government and for property allotments. They purchased 5,000 acres and divided it into farms of 160 acres; each person contributed 10 acres of his allotment for public use. It was essentially a Congregational venture, after the pattern set by the Pilgrim Fathers. The group was carefully chosen, and moral and intellectual requirements were established for later admissions. Opposite the Congregational Church, at the crossing of the main streets, is the ORIGINAL VERMONTVILLE CHURCH AND ACADEMY (*open by arrangement*), built in Colonial style in 1843 to replace the temporary log schoolhouse. The building is in good condition and is used for church and social activities.

CHARLOTTE, 19.5 *m.* (919 alt., 5,307 pop.), a small manufacturing city, leads the State in the distribution of maple sugar. On one large farm, 1,000 trees are tapped and approximately 350 gallons of syrup obtained annually. Eaton County, of which Charlotte is the seat, produced 322 tons of maple sugar in one year. At the height of the season, March 1 to 15, activity is intense, continuing day and night while the sap runs. Each tree yields from 13 to 15 gallons. It must be gathered immediately, held as briefly as possible in storage tanks, boiled over great roaring fires, and strained four times, through felt, while the syrup is hot.

The KELLOGG FOUNDATION (*see Battle Creek*), with the aim of utilizing the resources of the community for the welfare of children,

sponsors a county unit in Charlotte. Visiting nurses check health conditions of school teachers and children in the city and in outlying districts, and, whenever necessary, treatment by physicians and dentists is provided. The doctors, aided by health committees, conduct community health-education programs.

In Charlotte is Bennett Park, 112 acres of natural forest equipped for tourist camping. Near the southern end of the city is the CHARLOTTE MEMORIAL GROVE, 18 acres of trees of different species, in the midst of which is a stone monument to the war dead.

Left from Charlotte on State 50 to EATON RAPIDS, 115 *m.* (889 alt., 2,822 pop.), on the Grand River, which furnishes power for local woolen mills. The city is at the center of Michigan's largest sheep-raising area. Many mineral springs make Charlotte a popular spa. In the river, east of the main part of the city is the Island, a picturesque spot; and on the eastern bank of the Grand is the 33-acre MICHIGAN HOLINESS ASSOCIATION CAMP GROUND, with cottages and an auditorium.

Right 4 *m.* from Eaton Rapids on State 188 to the VETERANS OF FOREIGN WARS NATIONAL HOME (*open by permission*), a 640-acre child-welfare colony, where 180 children of deceased veterans are accommodated in 20 modern brick buildings.

The large TANGLEWOOD SCHOOL AND HOME (L), 26.5 *m.*, occupying a tract of 300 acres, is maintained for the care of children, from 3 to 11 years of age, afflicted with speech difficulties and other handicaps resulting from infantile paralysis, sleeping sickness, glandular deficiencies, and malformations. For many years, Mr. and Mrs. D. S. Davis, who now operate the school, were accustomed to have unfortunate children from some institution living with them and their own family. The number of recipients of their attention grew, and eventually a place larger than a private home was needed. The Davis family moved to Tanglewood Farm and, in 1932, remodeled it to suit the needs of a certified school. Each fall, the home's 25 children are taken by automobile to Fort Lauderdale, Florida, to remain there for the winter season.

At 27 *m.* is a junction with a side road.

Left on this road to the home of Mrs. Carl Reid (R), 02 *m.*, the possessor of a PREHISTORIC PIPE (*inspection by arrangement*) that possibly is older than any known Indian relic of this region. It is believed that the soft sand-colored stone of which the pipe is made came from the shores of Lake Michigan. At one time, the stone was covered with a bronze-red coating, a part of which still remains. The pipe was discovered at a reported depth of 35 feet, during excavations on the Reid farm.

OLIVET, 30 *m.* (885 alt., 566 pop.), in a stock-raising agricultural community, is the home of OLIVET COLLEGE, a coeducational school founded in 1844. This is the second-oldest denominational college in the State (*see Albion, Tour 2b*) and the only Congregational one. The aging buildings, on a hill above the village, stand among great oaks and maples. The site was chosen when the Reverend John Shiperd, founder of Oberlin College in Ohio, became lost in the wilderness while trying to get farther north to establish a second institution. After re-

peated but unsuccessful attempts to find his way out, he accepted his plight as the restraining hand of God, a sign that he was to found the college here. He knelt in prayer and dedicated the spot to that purpose.

Numerous interesting possessions of the school are exhibited in MATHER HALL, among them a notable collection of North American birds, a group of Stephen Foster's folios, and a fifteenth-century hymnal, beautifully illuminated. This hymnal, with great wooden covers four by five feet, hinged with leather, is believed to have been made by Spanish monks. Olivet College gained the attention of writers in 1936, when it established the Olivet Writers' Conference for Midwest writers, similar to the New England and Colorado conferences.

The town has a large factory that produces crates for the onion growers of the vicinity.

MARSHALL, 43 *m.* (1,000 alt., 5,019 pop.) (*see Tour 2b*), is at a junction with US 12 (*see Tour 2b*). At 55 *m.* is a junction with State 60 (*see Tour 3*).

TEKONSHA, 55.5 *m.* (947 alt., 595 pop.), first settled in 1832 on the site of an Indian village, was named for a beloved chief of the Potawatomi, Tekonquasha (1768-1825), whose body is believed to be buried somewhere in the present village. At the southern limits is a MONUMENT TO TEKONQUASHA (R), erected in 1924 by the community.

GIRARD, 61 *m.* (240 pop.), founded in 1829, is a farming community near eight lakes, some of them excellent fishing waters. GIRARD LAKE, west of the village, is stocked with northern pike and bluegills. Mounds of prehistoric origin exist in the neighborhood, where the skeletal remains of very tall men have been uncovered.

The MICHIGAN CHILDREN'S VILLAGE (L), 63 *m.*, was formerly known as the State Public School and operated under that name from 1874 to 1935. During those years, it was the only home in Michigan admitting both normal and defective destitute children, but an act of the legislature in 1935 restricted its enrollment to the defective and placed it under the control of the State hospital commission. It cares for nearly 200 mentally retarded children between the ages of 9 and 15. The children are given academic school work in so far as possible, and efforts are made to train them along vocational lines.

COLDWATER, 66.5 *m.* (982 alt., 6,735 pop.) (*see Tour 1*), is at a junction with US 112 (*see Tour 1*).

At 71 *m.* is a junction with County 318.

Left on this road to COLDWATER LAKE, 1.5 *m.*, largest of a group, with 33 miles of shore line. A popular island development and several shore resorts along the lake offer facilities for water sports, dancing, and golfing. There are free picnicking grounds, and supplies can be purchased at several points on the lake.

KINDERHOOK, 76.5 *m.* (85 pop.), in a lake region, attracts many resorters and fishermen.

US 27 crosses the INDIANA LINE, 79.5 *m.*, nine miles north of Angola, Indiana.

Tour 13

Lansing—Jackson—(Bryan, Ohio); US 127.

Lansing to the Ohio Line, 83 *m*.

Roadbed hard-surfaced throughout.

Michigan Central R.R. parallels route between Lansing and Jackson; Cincinnati and Northern R.R. between Addison and Ohio Line.

Usual accommodations.

US 127 traverses a section of Michigan that has grown and prospered for more than a century. There is little trace on the rolling hills of the heavy woods that covered the entire area when pioneers from New York and New England settled here and laboriously cleared the lands. Like other fertile districts, this territory was once a favorite with the Indians. Mounds, burial grounds, and village sites of the Sauk, Chippewa, Potawatomi, Fox, and other tribes are scattered along the way. Indian trails cross at the confluence of the Grand and Portage Rivers, formerly the site of two Indian villages, and another trail parallels the highway into Jackson.

Section a. LANSING to JACKSON; 37 m. US 127.

LANSING, 0 *m*. (843 alt., 78,397 pop.) (*see Lansing*).

Lansing is at a junction with US 16 (*see Tour 4a*), and with US 27 (*see Tour 12b*).

The MASON HOGBACK (L), 9 *m*., is the longest esker in the New World. This ridge of glacial gravels extends from a few miles north of Lansing almost to Leslie, a distance of 11 miles, and is often in view from the route. The sinuous, snakelike formation, with characteristically steep slopes, is composed of jumbled materials that choked the rivers beneath melting glaciers 30,000 years ago. Gravel pits scar the ridges, as they do most ridges of similar origin in Michigan. Along a number of the crests and gentler slopes of the Mason Hogback are apple, pear, and peach orchards and several vineyards.

MASON, 13 *m*. (886 alt., 2,575 pop.), settled in 1836 at the junction of two Indian trails, is the seat of Ingham County, which was established in 1838. Not until 1840, however, was Mason designated as the county seat; in the interim, court was held on the property of Charles Thayer, who had paid the expenses of three commissioners appointed in 1836 to find a suitable location for a judicial seat. The commissioners had passed by the young village of Mason and selected Thayer's place, because it was at the geographical center of the county.

It was Thayer's ambitious hope that, not only the county seat, but also the State capital would be established on his property.

Mason is at a junction with State 36.

Left on State 36 to a junction with a black-top road, 1 m.; R. to the MASON STATE GAME FARM (R), 3.5 m., a 200-acre plot devoted to the rearing of up-land game birds and waterfowl. About 2,400 breeder pheasants, 400 pairs of Hungarian partridges, and many species of ducks are kept on hand. In 1938, the farm distributed 1,200 pheasant chicks and 28,000 pheasant eggs, most of them to conservation groups and 4-H Clubs in the Lower Peninsula south of Saginaw Bay and in the Muskegon Valley. North of these districts, winters are too severe and food is too scarce for pheasants. Experiments with Hungarian partridges, which thrive in the extreme southern part of the State, have been only partially successful, infectious diseases common to these birds have made quantity production impossible. Ducks are reared exclusively for stocking tests and disease experimentation. The surplus stock goes to game sanctuaries and Federal refuge projects. More than 100 were sent in 1936 to the W. K. Kellogg Bird Sanctuary (see *Tour 2b*) for special study.

NORTH LESLIE, 21.5 m., is part of the village of Leslie. At its western edge, along Rice's Creek, INDIAN MOUNDS cover a tract of 15 or 20 acres. Among the bones unearthed were a human skull, so large that no hat in Leslie could be found to fit it, and a thigh bone three inches longer than that of the tallest man in the village. In the vicinity are rectangular earthworks, with entrances at the ends, possibly thrown up for defensive purposes by the vanished race of mound builders.

LESLIE, 22.5 m. (936 alt., 1,105 pop.), settled in 1836, is a thriving agricultural community. Artesian wells, 180 feet in depth, bring to the surface some of the finest water in the State.

At 34.4 m. is a junction with County 382.

Left on this road to a junction with State 106, 0.8 m.; L. here to the new STATE PRISON OF SOUTHERN MICHIGAN (*adult visitors admitted, by permission only*), 1.1 m. (R), which in 1930 replaced the Michigan State Prison at Jackson. Standing on a hill, starkly outlined against the sky, the buildings suggest a medieval fortress. The 1,500-foot structure, fronting the highway, contains four huge cell blocks, accommodating 2,000 of the prison's more than 5,000 inmates. Seven prison farms, totaling more than 3,000 acres, lie within a five-mile radius, a textile plant, a brush factory, a binder twine plant, a metal stamping plant, a cannery, a print shop, a salvage department, and a garment factory are operated by the prisoners. Excepting binder twine, the products are sold exclusively to State institutions. The laundry, four dining halls, a kitchen, a bakery, and a power plant are operated by the staff with prison labor. Encompassed by walls 34 feet high and 2 feet thick, the prison is a balanced and self-sufficient community.

The Grand River, which bisects JACKSON, 37 m. (995 alt., 55,187 pop.), in some parts of the downtown district, is entirely bridged over by office buildings. A 'make your home in Jackson' movement was promoted as early as 1836. Since then, the city's natural advantages and the enterprising spirit of its leaders have helped to make it a successful manufacturing center.

The main business district, with its broad streets in which 14-story office buildings contrast with rows of squat stores, is modern and busy. Through traffic between Detroit and Chicago fills its thoroughfares at

all hours, and 60 trains, stopping daily in the business zone, contribute to the bustle and activity. Outside this area, Jackson is an average central-Michigan industrial city, with most of its industries grouped in the eastern end. Here, too, are many rows of shabby houses occupied by foreigners and Negroes, who comprise an eighth of the population. These and other workers gravitated toward the city in response to demands for labor in the manufacturing plants and in the railroad shops and yards, where 750,000 freight cars are handled annually.

In the north, west, and south are residential areas, where large substantial residences, designed to meet the requirements of another generation, stand beside trim modern homes on pleasant, tree-shaded streets. During their blossoming season, a profusion of rose bushes brings color and beauty to the streets and gardens of the city.

The site selected for the future city of Jackson was at the intersection of Grand River and an Indian trail, the only two means of communication through the wilderness in 1829. Many pioneers from the East stopped here, and the forests provided the first industry. Grist-mills followed, and the community became a trading center. Michigan State Prison was established here in 1838 and remained in Jackson until 1930, when it was removed to the neighboring hills.

The city became nationally known and won its greatest fame when, on July 6, 1854, the Republican party was formed and named at a convention held in Jackson. For want of a hall large enough to contain the 5,000 Michigan electors who came, the convention took place under the 'green spreading oaks.' Represented were various 'splinter' parties of that period: the Abolitionists, Free Soilers, Wilmot-Proviso Democrats, and Anti-Slavery Whigs. The two-day rally attracted State and national figures, among them the president of the first Republican convention, David S. Walbridge, an active and earnest Whig and, later, Republican congressman from Michigan; Kinsley S. Bingham and Zachariah Chandler; Jacob M. Howard, who was to become United States senator and author of the Thirteenth Amendment; and the platform committeeman, Austin Blair, Michigan's Civil War governor and, later, United States congressman. The party's first platform, announced at the convention, included a denunciation of the repeal of the Missouri Compromise, demanded repeal of the fugitive slave law, and took a decisive stand against the extension of slavery. In other parts of the land, meetings of various dissident party members had been held prior to this convention, but Jackson can legitimately claim to be the birthplace of the Republican party.

The original Michigan Central Railroad reached the city from Detroit in 1841, and, 30 years later, the junction railroad shops, Jackson's first great industrial enterprise, were established here. The city rapidly became a manufacturing center and one of the country's leading producers of carriages. When the automobile began to replace horse-drawn vehicles, the new industry inevitably grew up around the carriage factories. Plants were established for manufacturing the Jackson, the Imperial, the Clark-Carter, the Cutting, the Briscoe, and the Earl auto-

mobiles. When these companies moved away or were absorbed by larger organizations, satellite industries, including several accessories concerns, remained, and other manufacturers were attracted to the city. Jackson is today the headquarters of more than 40 industrial plants, manufacturing machinery and machine tools, automobile parts and tires, food-stuffs, radios, clothing, refrigerators, furniture, and electrical equipment.

Social and civic enterprises are maintained by businessmen's clubs, women's clubs, educational groups, church organizations, and other agencies. Through activity of such groups, Jackson, once known as the 'Prison City,' is coming to be known as the 'Rose City.' Various organizations encouraged the development of a distinctive blossom, the Jackson Rose, and then made it possible for residents to obtain bushes at cost. In addition to a popular county fair, a Rose Show is held annually the second Sunday in June.

Within the 530 acres of ELLA SHARP PARK (*picnic woods, fireplaces, tables*), at the southern boundary of the city, are a zoo, an 18-hole golf course, tennis courts, baseball diamonds, and gardens of roses and peonies.

In September, the COUNTY FAIR GROUNDS (formerly Keeley Park), Ganson St., at the north end of North Jackson St., is the scene of the annual Jackson County Fair, which dates back to 1853. Harness racing on a half-mile track is a regular feature. The grandstand seats 7,500.

THE SITE OF THE FOUNDING OF THE REPUBLICAN PARTY, northwest corner of West Franklin and 2nd Sts., is marked by a pile of rough stones; a bronze tablet reads, 'Here, under the oaks, July 6th, 1854, was born the Republican Party, destined in the throes of civil strife to abolish slavery, vindicate Democracy and perpetuate the Union.' The tablet was formally dedicated in 1910 by President William Howard Taft.

A favorite camping place on the ST. JOSEPH TRAIL is marked by a bronze plate, imbedded in the sidewalk, at the northeastern corner of Michigan Ave. and S. Jackson St. On early maps of 'Jacksonopolis,' this Indian path was practically the only road connecting the city with the outside world.

THE SPARKS FOUNDATION, entered from the western end of West High St., 465 acres donated by William and Matilda Sparks, contains the ILLUMINATED CASCADES (*lighted Fri., Sat., and Sun. nights, 7:50-9:30*), a series of brilliantly colored artificial waterfalls, fed by natural springs and auxiliary wells. The cascades extend 500 feet. The 64-foot drop is divided into 11 falls, over which flows enough water to supply a city of 30,000 population. More than 1,000 lamps blend the cardinal colors into every shade of the spectrum. The CASCADES CLUBHOUSE, L. from the cascades, on the Kibby Road side of the Foundation, is of Old English sand-molded brick, with a roof of antique handmade tiles. The CASCADES GOLF COURSE, 18 holes, is part of the Sparks Foundation.

The **MILITARY GROUP**, a Civil War memorial in a small triangular plot at the intersection of W. Michigan Ave. and Wildwood St., was presented to the city in 1903 by the late General William Withington, Civil War veteran and one of Jackson's civic and industrial leaders. The bronze group, symbolizing courage, patriotism, and self-abnegation, is the work of Lorado Taft.

Jackson is at a junction with US 12 (*see Tour 2a*) and State 60 (*see Tour 3*).

Section b. JACKSON to the OHIO LINE; 46 m. US 27.

South of JACKSON, 0 m., US 127 traverses a region of rolling farm lands and small villages.

At 16 m. is a junction with US 112 (*see Tour 1*), with which US 127 is united for 2.5 miles (*see Tour 1*).

At 19 m. is the eastern junction with US 223.

Left on US 223 to DEVIL'S LAKE, 3 m (117 pop.), a popular summer resort. The lake was formerly a favorite Indian gathering place, and villages at both ends were connected by several trails. Farm settlement began in 1833.

ADRIAN, 20 m. (810 alt., 13,064 pop.), where more than 80 per cent of the residents own their homes, is the seat of Lenawee County. Called the 'Maple City of Michigan,' because of the fine old trees that shade its streets, it is a prosperous small college town, as well as an industrial and agricultural center. Adrian was founded in 1826 by Addison J. Comstock, who, with his father, Darius, projected the Erie and Kalamazoo Railroad from Toledo, Ohio, to Adrian, an undertaking begun in 1832 and completed in 1836. The line, the first railroad west of Schenectady, New York, and one of the earliest in the Nation, was operated at first with horses; a locomotive was obtained in 1837.

One of Adrian's notable citizens is Elmer D. Smith, whose reputation as a grower of chrysanthemums is world-wide. He has originated 586 varieties, and his trade extends to such distant points as Italy, Japan, Guatemala, and Nova Scotia. Already successful in prolonging the blooming season, Mr. Smith is experimenting with plants that will withstand frost, so that the season can extend beyond the present danger line in early October. He is also trying to develop a blue blossom. The **SMITH CHRYSANTHEMUM GARDENS** are at W. Maumee and Scott Sts.

ST. JOSEPH'S COLLEGE (*open school hours*), North St., at the eastern city limits, is a Roman Catholic school for women. ADRIAN COLLEGE (*open school hours*), at Williams and Madison Sts., founded in 1859, is controlled by the Methodist Church. On the 20-acre maple-fringed campus are the five brick buildings of the college, among the most attractive in the State.

IN MONUMENT PARK, E. Church St. and Park Place, is the ADRIAN SOLDIERS MONUMENT, the main shaft of which was originally one of the pillars of the old United States Bank building in Philadelphia. It

was dedicated in 1870. ISLAND PARK, containing 22 acres, lies off the north end of Broad St., in the River Raisin.

ADDISON, 22.5 *m.* (1,058 alt., 452 pop.), was settled in 1836. For many years, its chief industry has been flour milling.

Left from Addison on County 330 to MANITOU BEACH, 3 *m.* (150 pop.), a summer resort with post office and general store. It occupies the site of an Indian village on the shores of Devil's and Round Lakes.

HUDSON, 33 *m.* (901 alt., 2,361 pop.), is a shipping point for a rich farming section and the home of several industries, including flour milling, harness making, and the manufacture of pumps.

Left from Hudson on State 34 to the BIRTHPLACE OF WILL CARLETON (1845-1912), 2 *m.*, Michigan poet and lecturer, remembered for his Farm Ballads and, particularly, 'Over the Hills to the Poorhouse.'

US 127 crosses the OHIO LINE, 46 *m.*, 22.5 miles north of Bryan, Ohio.

Tour 14

Petoskey—Cadillac—Big Rapids—Grand Rapids—Kalamazoo—Three Rivers—(Elkhart, Ind.); State 131, US 131.
Petoskey to Indiana Line, 290.5 *m.*

Roadbed hard-surfaced except for two graveled stretches in north portion. Grand Rapids and Indiana R.R. parallels route between Petoskey and Kalamazoo; New York Central R.R. between Portage and US 112. Accommodations at short intervals.

The route follows State 131 for the first 74 miles, through a region once thickly covered with pine and hardwood forests. Since the late nineteenth century when these were cut down, the inhabitants have derived a livelihood from the soil, supplemented in recent years by the growing tourist trade. In this part of the State are hundreds of lakes and streams, little known except by local sportsmen. The greater part of the route follows US 131.

Section a. PETOSKEY to GRAND RAPIDS; 196.5 m. State 131, US 131.

PETOSKEY, 0 *m.* (656 alt., 5,740 pop.) (see Tour 15a), is at a junction with US 31 (see Tour 15a). A ridge top, 2 *m.*, surrounded by

rolling farm lands and patches of forest, overlooks the city and the blue waters of Little Traverse Bay.

At 9 m. is a junction with State 75.

Right on State 75 to WALLOON LAKE, 0.5 m. (110 pop.), a resort village on a beautiful hill-encircled lake of the same name. Five thousand acres in area, the water of Walloon Lake is so pure that local residents use it in their storage batteries. While the forests lasted, several sawmills and a wooden butterbowl factory brought prosperity to the village. However, when fire destroyed the business district in 1916, the damaged property was never restored, and the residents now derive most of their income from the community's recreational facilities (*boating, swimming, and fishing; a golf course and tennis courts*).

The summer homes and cottages of BOYNE CITY, 7.5 m (600 alt., 2,650 pop.), extend more than four miles on both sides of Lake Charlevoix and up the Boyne River from its mouth. In contrast, the business section is small and compact. Still standing are the ruins of a sawmill, a charcoal foundry, and other plants utilizing forest products. A SOLE LEATHER FACTORY employs approximately 300 men the year round, but the tourist trade is the principal source of revenue. The smelt runs in the river in late March or April (the fish do not move until water temperature reaches 36°) start the recreational season. Some 4,000 visitors attend the three-day Smelt Festival, ceremonies of which include the crowning of a Smelt Queen, and a banquet. When a run starts, usually at midnight or later, an official turns on lights over the river and fires his gun. At this signal, thousands of people with nets and waders rush into the water. For 30 minutes the fishermen stumble about and dip frantically, putting their catch into barrels, baskets, and sacks, or piling the fish in heaps along the shore. Then the lights go off and the dippers are ordered out of the water. About three hours later, a second period begins, and, if fish are still plentiful, a third dipping is permitted just before daylight. The netting goes on until the spring run is ended, the catch usually exceeding 25 tons of marketable fish. In winter, hooking the smelt through the ice of Lake Charlevoix is a popular sport. About 400 fishing huts are hauled onto the ice to make the shanty community, Smeltania, which has a mayor, city manager, and a police force to direct traffic. For the season's largest catch, usually exceeding 8,000 smelts taken by hook and line, a prize is awarded.

BOYNE FALLS, 16 m. (706 alt., 199 pop.), cradled in the hills, spreads over the slopes on either side of the Boyne River near its source. The stream is excellent for trout fishing, and the water is claimed to be beneficial in the treatment of rheumatism. Industrial units include a wood-novelty factory and a sawmill.

South of Boyne Falls the graveled highway winds through hilly agricultural country, forested with second-growth maple, beech, oak, and poplar.

ALBA, 33 m. (450 pop.), was named for Alba Haywood, elocutionist and impersonator, who gave occasional performances in the village. Impressed by the hospitality of the residents, he said he had never seen 'whiter people.' In consequence, the village was named Alba (Latin, *albus*, white), and its slogan was 'Alba is white; we treat you white.' During lumbering days, Alba manufactured broom handles, butterbowl, and other articles of wood. Today, it is the center of a farming area.

MANCELONA, 40 m. (1,112 alt., 1,143 pop.), adjoins Antrim, and many of its inhabitants work in the Antrim Iron Company furnace and sawmill. The company operates a large farm and a store that supplies seed potatoes to the surrounding region.

ANTRIM, 41 *m.* (250 pop.), originally called Furnaceville, was given its present name when the Antrim Iron Company purchased the IRON FURNACE AND SAWMILL (L), built in 1882. The furnace is one of five in the State still using charcoal as fuel, and the sawmill is the last of considerable size in the Lower Peninsula.

South of Antrim, the highway rolls through acres of jack pine; deer are often encountered on the road. The countryside, with its many lakes and streams, is a popular recreational area.

KALKASKA, 53 *m.* (1,200 alt., 861 pop.), seat of Kalkaska County, settled as a logging railroad grading camp, is the supply center of the surrounding farm and resort area. In 1873, a tannery and sawmill were put into operation. In 1900, with the depletion of timber, Kalkaska's 3,000 residents began gradually to withdraw to farmlands and industrial cities until three-fourths of the population had left. In the Kalkaska region are 75 inland lakes and the headwaters of several large streams, including the Boardman and Manistee Rivers, whose waters provide brook, rainbow, and German brown trout. The season, which begins on the last Saturday in April, is opened with a two-day Trout Festival.

Left from Kalkaska on County 612 to a junction with a township road, 6 *m.*; L. here to DARRAGH, 8 *m.* (6 pop.), the trading center of a farming area traversed by roads leading to the hardwood stands of Kalkaska County.

1. Right from Darragh on a dirt road to MANISTEE LAKE (L), 2 *m.*, a favorite haunt of sportsmen. This 800-acre lake is well stocked with large-mouth bass, perch, and pike, and is an excellent duck-hunting site. On the southern shore is a small resort settlement with a hotel and several cottages and an excellent beach, safe for children; along the southwestern shore is a public campground. The North Branch of the Manistee River, flowing out of the lake, offers good fishing and canoeing.

2. North (*straight ahead*) from Darragh on County 571 to Section 21 of Goldspring Township, 10 *m.* This section, according to lumbermen, contains the finest stand of hardwood timber in the entire KALKASKA VIRGIN FOREST. At many points the trunks of hemlock, maple, birch, and beech rise 50 or 60 feet before branching out.

The road turns R. at 11 *m.* and follows the same section of timber eastward, turning L. at 14 *m.* to enter the very heart of the great woods, little known even by Michigan people. This area is now being lumbered, and the sound of chopping, the singing of crosscut saws, and the crash of falling timber bring to mind the Michigan of the last century.

Right at 14.5 *m.* on the intersecting east-west trail to BIG TWIN LAKE (L) and LITTLE TWIN LAKE (R), 15.5 *m.* The shores of the Big Twin are fringed with sand beaches, and there is ample space for camping on both lakes, where bass, cisco, and perch abound. Many side roads lead to small lakes, streams, and forest areas where deer are plentiful.

FIFE LAKE, 71 *m.* (1,015 alt., 227 pop.), has at its front door the much-frequented lake of that name, with its two small islands. The lake, about one-and-a-half miles in diameter, is well-stocked with fish, while the jack pine lands north of the village afford deer, bird, and rabbit hunting.

At 74 *m.* State 131 becomes US 131.

MANTON, 86.5 *m.* (1,132 alt., 1,008 pop.), settled in 1871, owes its development to lumbering and still operates a sawmill and planing mill. A pickle factory provides employment in the cucumber season.

At 87 *m.* is a junction with State 42.

Left on State 42 to a junction with State 66, 10 *m.*; R here to LAKE CITY, 13 *m.* (1,200 alt., 610 pop.), on LAKE MISSAUKEE. In the municipal park, covering two acres in the center of the city, is one of the largest pine logs ever taken from the woods in this section, it measures 70 inches in diameter at the butt. Indian burial mounds, fortifications, pipes, and pottery have been found in the vicinity.

CADILLAC, 98 *m.* (1,292 alt., 9,570 pop.), was named for Antoine de la Mothe Cadillac, founder of Detroit. Settled by timber operators, the village was still in the boom stage at the time of its incorporation in 1877. Its central location and the presence of two through-line railroads led to the establishment of new industries. Today one plant produces automobile tires; another, potato flour and artificial snow; and six other plants manufacture wood and metal products. With the development of better highways, the city began to attract tourists and became a resort of year-round appeal.

The summer season is ushered in by a two-days Summer Celebration (June 22-3). The first day is devoted to touring the countryside on foot, under the guidance of U. S. Forest Service rangers; the second, to water sports climaxed by a Viking Festival on Lake Cadillac, with choral singing, fireworks, and a parade of floats. Later in the season (*no set date*), the Annual Outboard Motor Races are held at the 'Rocks' on Lake Cadillac. The leading celebration of the year is the Winter Sports Carnival (3 *days beginning last Fri. in Jan.*), which was officially organized in 1935. The first day is given over to skiing, tobogganing, bobsledding, and snowshoeing; in the evening, there is an old-time fish fry and muskrat supper. The second day's program includes skating races and figure skating; the queen of the carnival is crowned at a coronation ball in the evening. On the closing day there are hockey games, ski-jumping contests, snowshoe races, and a fox hunt across the ice of Lake Cadillac.

DIGGINS PARK, North Holbrook St., on the summit of Standpipe Hill, affords a view of the city and of the ridge of hills some miles distant. The hill received its name from the fact that it once held an emergency water reservoir for use during fire or drought. On the west side of the park is a ski track and toboggan slide.

At the city dock on the lake shore at the foot of Harris St. is the LOWER CITY PARK, a favorite rendezvous for anglers seeking small pan fish. Stone seats are arranged at intervals along the shore, which is protected by breakwater. The park has a swimming pool for children, a miniature waterfall, and a small powerhouse and waterwheel driven by a stream that flows into Lake Cadillac.

LE ROY, 114 *m.* (270 pop.), is the center of a stock-raising area, originally settled by a group of Scandinavians. About 1870, the Grand Rapids and Indiana Railway sent an emissary to Norway and Sweden

to induce emigrants to come here, with the promise of work and free land, and religious and political freedom. One thousand families emigrated to Grand Rapids, and others, on invitation, settled in Le Roy.

South of Le Roy the highway enters a country of valleys, sparsely wooded, given over largely to dairy farms.

ASHTON, 120 *m.* (180 pop.), is a small farming community, notable chiefly as the childhood home of Anna Howard Shaw (1847-1919), well-known reformer and suffragist who preceded, and worked with, Carrie Chapman Catt. Here she preached her first sermon, and a MONUMENT in Frayer Halladay Park (R) commemorates her public work.

REED CITY, 128 *m.* (1,035 alt., 1,792 pop.) (*see Tour 5c*), is at a junction with US 10 (*see Tour 5c*).

To PARIS, 134.5 *m.* (150 pop.), in 1867, came a trapper named John Parish, and the settlement that grew around his shack was named after him. Usage later corrupted the name. The PARIS STATE FISH HATCHERY (L) is devoted principally to the propagation of German brown trout, although small quantities of brook and rainbow trout are also reared. After fertilization, eggs from the breeder stock are shipped to other hatcheries throughout the State.

BIG RAPIDS, 140.5 *m.* (916 alt., 4,671 pop.), seat of Mecosta County on the upper Muskegon River, was originally named Leonard for an early settler, but the practice of addressing mail to persons 'at the big rapids' led authorities to change the name. The first house in Big Rapids, erected in 1854, stood at what is now the northwestern corner of N. State and W. Bellevue Sts., marked today by a commemorative plaque. When lumbering began, the settlement grew so rapidly that an acute food shortage occurred during the winter of 1857-8. The entire population probably would have perished had not three backwoodsmen, experienced in torch hunting at night, supplied each family with venison until spring. When the timber was depleted, Big Rapids, which has 20 lakes in its environs, became a year-round vacation resort. In the early 1930's, natural gas was discovered in Mecosta County, and Big Rapids experienced an industrial revival. The gas field, the largest of its kind in Michigan, produces more than 1,500,000,000 cubic feet daily and supplies Lansing, Bay City, Milwaukee, and other cities.

FERRIS INSTITUTE, originally a privately operated 'school for the masses,' is at Oak and Ives Sts. Founded in 1855 by Woodbridge N. Ferris, later governor of Michigan and U. S. senator, the institution was reorganized in 1923 and incorporated in the State educational system. Senator Ferris continued as active head until his death in 1928. Courses are given in commercial and academic subjects; tuition is low; and anyone—citizen or noncitizen—can attend, irrespective of age or previous preparation.

ROGERS DAM (L), 147 *m.*, on the Muskegon River, is beautifully set among the hills. The powerhouse built in 1905 was destroyed by fire, and the property was acquired later by the Consumers Power

Company. Electrical power generated here is distributed to Grand Rapids, Muskegon, and Big Rapids.

MORLEY, 155.5 *m.* (885 alt., 322 pop.), was settled in 1869, as a trading and supply center for the surrounding territory. In one respect the flavor of the past has been retained: the village blacksmith carries on his business as he did years ago.

At 159.5 *m.* is a junction with State 46 (*see Tour 7b*), with which US 131 is united to HOWARD CITY, 162.5 *m.* (870 alt., 872 pop.), on the Tamarack River, a former lumbering center saved from extinction by agriculture and now experiencing a boom from discoveries of oil and gas.

South of Howard City, US 131 leads through PIERSON, 168.5 *m.* (903 alt., 144 pop.), SAND LAKE, 170.5 *m.* (947 alt., 358 pop.), and CEDAR SPRINGS, 175 *m.* (649 alt., 1,104 pop.), summer trade centers for adjacent resorts.

At 178 *m.* is a junction with State 57.

Left on State 57 to GREENVILLE, 14 *m.* (813 alt., 4,730 pop.), an important potato market on the Flat River. Now a village of small industries, it was once a thriving lumber center. A boulder at the city hall marks the junction of the Ojibway, Ottawa, and Potawatomi Trails with the Saginaw, Pentwater, and Upriver Trails. Right on State 66 through BELDING, 22 *m.* (700 alt., 4,140 pop.), to LOWELL, 38 *m.* (639 alt., 1,919 pop.), at a junction with State 21 (*see Tour 6b*).

ROCKFORD, 182.5 *m.* (687 alt., 1,613 pop.), on the Rogue River and Rum Creek, is a resort and manufacturing city. Its main industry is a tanning, shoe, and glove factory that gives employment to more than 500 persons.

GRAND RAPIDS, 196.5 *m.* (655 alt., 168,592 pop.) (*see Grand Rapids*).

Grand Rapids is at a junction with US 16 (*see Tour 4b*) and State 21 (*see Tour 6b*).

Section b. GRAND RAPIDS to KALAMAZOO; 48 m. US 131.

South of GRAND RAPIDS, 0 *m.*, US 131 crosses a wide agricultural and dairying area, where the soil is especially favorable to the raising of onions and celery.

The highway proceeds due south through a prosperous farm country to WAYLAND, 21 *m.* (900 alt., 1,013 pop.), which derives its revenue from the dairy industry. The Pet Milk Company processes 6,000,000 pounds of milk a month, or 130,000 cans a day. There is also a factory making archery equipment and supplies.

BRADLEY, 24 *m.* (153 pop.), is a crossroads settlement.

Left from Bradley on County 434 to a junction with an earth road, 2 *m.*; R. to the BRADLEY INDIAN SETTLEMENT, 3.5 *m.*, where 75 Indians of the Ottawa, Potawatomi, and Chippewa tribes have built their community around a church and mission. Many of them have attended Indian schools, and only the older members can speak their native tongue.

At 26.5 m. is a junction with County 430.

Left on this road to GUN LAKE, 5 m., with an irregular shore line broken by many coves. In the Gun Lake vicinity, there are 80,000 acres of onions under cultivation, one of the largest tracts in the State. The industry was begun in 1924 on reclaimed swampland.

PLAINWELL, 36 m. (1,000 alt., 2,279 pop.), a thriving city on the Kalamazoo River, depends for its prosperity upon a large paper mill, an office-equipment factory, and some canning plants; one of the latter markets an unusual product, a nut soup. Many of the residents work in Kalamazoo.

Right from Plainwell on State 89 to OTSEGO, 3 m. (721 alt., 3,245 pop.), on the Kalamazoo River, a paper-manufacturing city with three mills. Rapids south of Otsego generate power for the paper companies. South of the promontory is a level plain, one of the 'oak openings' made famous by James Fenimore Cooper.

ALLEGAN, 13 m. (715 alt., 3,941 pop.), in a diversified farming, fruit, and dairying country, has several active farmer co-operative associations. Its chief industrial units are a large drug manufactory and a universal-joint factory. The Kalamazoo River, used as a source of power for Allegan's light plant, makes a horseshoe bend around the business section, leaving the residential portion partly on a peninsula, partly on a plateau 20 to 50 feet above the river. West of the city in a pine grove is the former PINE GROVE SEMINARY, Crescent and Academy Sts., established as an academy in 1847, now part of the city school system. A fine mineralogical exhibit is here.

KALAMAZOO, 48 m. (775 alt., 54,786 pop.) (*see Kalamazoo*).
Kalamazoo is at a junction with US 12 (*see Tour 2b*).

Right from Kalamazoo on West Main Street (State 43) to the WOLF LAKE FISH HATCHERY (L), 7.5 m., one of the largest spawning and rearing stations in the United States. The hatchery covers about 100 acres and further expansions are under way, it now has 25 rearing ponds, the largest having an area of 34 acres, are adjoined by two large raceways and a small display pool. When the little fish are able to forage for themselves, they are hauled away in trucks and tank cars and planted in lakes and streams of the State. Among the chief species raised at Wolf Lake are brook, rainbow, and German brown trout, bluegills, and large- and small-mouth bass. Two sturgeon and a few Montana grayling—the latter brought here in an effort to replace the nearly extinct Michigan species—are kept for propagation (*see Grayling, Tour 12a*).

Section c. KALAMAZOO to the INDIANA LINE; 46 m. US 131.

South of KALAMAZOO, 0 m., the highway continues through farming and dairying country.

SCHOOLCRAFT, 13 m. (892 alt., 833 pop.), is the village at which James Fenimore Cooper stayed when collecting material for *Oak Openings*. The two-story brick HEZEKIAH WELLS HOUSE, in which he lived, is on West Cass St., two blocks Right of US 131; a bronze plate commemorates Cooper's stay. Across the street, at 330 W. Cass St., is the brick house of Dr. Nathan Thomas, a hiding place in the days of the Underground Railroad for more than 400 fugitive slaves on their way from Cassopolis to Battle Creek.

Left from Schoolcraft on County 352 to VICKSBURG, 5 *m.* (854 alt., 1,735 pop.), where a rare attraction each July is the blossoming of the EGYPTIAN LOTUS BEDS in a cove of SUNSET LAKE, north of the village. Known as the 'Flower of the Nile,' the lotus blooms in the hot weather, rising a foot or more above the water. The blossoms are so sensitive that even a slight pressure is enough to make them wilt instantly. The plant was blooming on Sunset Lake when white men came into the country.

THREE RIVERS, 25 *m.* (900 alt., 6,863 pop.) (*see Tour 3*), is at a junction with State 60 (*see Tour 3*), with which US 131 is united for three miles.

CONSTANTINE, 35 *m.* (900 alt., 1,259 pop.), is the home of the Constantine Co-operative Creamery, organized in 1915. It produces more than 4,000,000 pounds of butter annually, as compared with 96,000 pounds in the first year of its operation.

At 38 *m.* is a junction with US 112 (*see Tour 1*); between this point and MOTTVILLE, 43 *m.* (106 pop.) (*see Tour 1*), the two highways are united. At Mottsville, US 131 branches south and crosses the INDIANA LINE, 46 *m.*, 11 miles northeast of Elkhart, Indiana.

Tour 15

Mackinaw City—Traverse City—Muskegon—Holland—Benton Harbor—Niles—(South Bend, Ind.); US 31.
Mackinaw City to Indiana Line, 376 *m.*

Roadbed hard-surfaced throughout.

Pennsylvania R.R. parallels route between Mackinaw City and Petoskey; Pere Marquette Ry. between Petoskey and Charlevoix, between Traverse City and Grawn, and between Hart and South Haven; New York Central R.R. between Benton Harbor and Niles.
Accommodations at short intervals.

Southward from the Straits of Mackinac, US 31 threads the highly developed recreational area bordering Grand Traverse Bay, named by the French, *voyageurs* who left the shore at this point on their trip along the east coast of Lake Michigan, to make a *grande traversée* (Fr., great crossing) across the mouth of the bay. Following the *voyageurs* and the Jesuit missionaries came the lumbermen, and after them the farmers, who recognized the favorable climate and soil and made the region one of the principal fruit-growing districts of the State.

Section a. MACKINAW CITY to TRAVERSE CITY;
107 m. US 31.

MACKINAW CITY, 0 m. (593 alt., 875 pop.) (*see Tour 11a*), is at a junction with US 23 (*see Tour 11a*).

Right from Mackinaw City on an improved road to WILDERNESS STATE PARK (*camping, picnicking facilities*), 8 m., a 6,369-acre tract acquired by the State in 1927 by tax sales and outright purchases. In 1935-6, five overnight shelter cabins were built by the CCC. Firebreak trails, open to hikers but not to automobiles, lead through a wild region in which deer, beaver, and waterfowl are plentiful. An 80-foot tower affords a view of the Straits of Mackinac and the shore of the Upper Peninsula.

South from the State Ferry Dock, US 31 passes the MACKINAW CITY GOLF COURSE (L), 1.5 m., then turns sharply west, 6 m., to skirt the shore of CARP LAKE (L). Dense timber alternates with summer resorts, and the lake, 1,600 acres in extent, provides good sport for the angler (*bass, pike, and pan fish*). CARP LAKE VILLAGE, 8 m. (75 pop.), serves the resort community.

LEVERING, 13 m. (300 pop.), is a shipping point for farm produce.

Right from Levering on County 646 to CROSS VILLAGE, 13 m. (230 pop.), on a steep bluff 100 feet above Lake Michigan. Most of the inhabitants are Indians of the Ottawa and Chippewa tribes. The men are engaged in commercial fishing; the women weave baskets of split ash and sweet grass, and fashion birchbark boxes decorated with porcupine quills. During the annual festival, held early in August, the Indians perform their War Dance, Buffalo Dance, Deer Dance, and Sun Dance.

Near the edge of the bluff, a Cross has stood for more than 200 years. Some claim that the first cross was planted by Father Marquette; the present one was erected in 1913. The earliest Jesuits named the place *Arbre Croche* (Fr., crooked tree), and later it was known as *La Croix* (Fr., the cross). It was given its present name in 1875. The point of land commands a sweeping view of Lake Michigan; the islands of the Beaver Archipelago lie along the horizon; nearer at hand, navigation aids mark dangerous reefs; lighthouses flash their warnings from island, reef, and shore.

In 1855, Father Weikamp established the Society of St. Francis Convent on a 2,000-acre tract at the northern end of the village. The convent, which owned large herds, a gristmill, a sawmill, and a carpenter-blacksmith shop, produced practically everything used by the community, from the wooden shoes worn by the nuns to currant wine. The convent was abandoned in 1896, and in 1906 the buildings were struck by lightning and destroyed. The TOMB OF FATHER WEIKAMP (*small adm. fee*) is open to visitors.

The SHURTLEFF HOUSE (*open by permission*), owned by the descendants of the original occupant, contains a collection of Indian and Colonial relics. Shurtleff, first teacher of the district school here, came to Cross Village at the request of Captain John Wagley, one of the first settlers. A man of prompt and decisive action, Captain Wagley, in 1856, bought the schooner *Abel* in Buffalo, New York, to transport a group of armed men to Beaver Island to drive off the Mormons (*see Beaver Archipelago*).

The HOLY CROSS CHURCH, at the east end of the village, was built in 1898. In the study of the church (*open by permission*) is a small WOODEN STATUE of unknown origin, found here in a little log church in 1850. Covered with a thin coating of plaster of Paris and painted brown, the three-foot statue represents an angel in the traditional garb of St. Raphael, although the features are those of an Indian.

South from Cross Village, an alternate route follows a graveled road along the lake shore to a junction with US 31, 2.5 miles northeast of Petoskey.

GOODHART, 20 *m.* (110 pop.), a former fishing and lumbering village, is a resort on the Lake Michigan shore. A small store, an Indian curio shop, and the post office are on the highway; the cottages are below the bluff, on the site of the old settlement

A turnout, 21.5 *m.*, along the brow of the bluff, is above the church and the scattered houses that are all that remain of MIDDLE VILLAGE, believed by some to have been the original Arbre Croche of the seventeenth-century missionaries. A huge crooked tree was so prominent a landmark for early French *voyageurs* and missionaries that the entire shore line from Sturgeon Bay to Little Traverse Bay was designated by the name Arbre Croche

Southward the road continues along the ridge crest overlooking Lake Michigan, following an old Indian trail through evergreen and hardwood forests. At various points along the way, earth roads lead down the steep bluff to summer settlements along the lake shore.

HARBOR SPRINGS, 34 *m.* (685 alt., 1,429 pop.), first called Little Traverse, was once the permanent home of a large tribe of Indians. Here, in 1827, the Mission of the Holy Childhood of Jesus was founded by Father Peter de Jean. The first building, erected with the aid of Indian labor, was of cedar logs and bark, it was followed immediately by a larger church and a school, which were finished in 1829. Instruction, during the first years of the mission's existence, was given in French. Later, a periodical, *Anishinabe Enamiad* (Praying Indian), was published at the school in the Ottawa-Chippewa language. Every spring, the family of each pupil brought a 'macok' of maple sugar to Father de Jean. These 'macoks'—birch bark containers holding from 60 to 100 pounds of sugar—the priest took to Detroit, where he traded them for materials to clothe the children. The CHURCH, on East Main St., has undergone many changes; rebuilt on a larger scale in 1842, it was again remodeled in 1892, the old structure being incorporated in the new. The school, which adjoins the church, has also been enlarged and improved.

Part of an Indian reservation established in 1855, the land now occupied by Harbor Springs was thrown open to the public in 1875 and settled rapidly thereafter. The early settlers derived their livelihood from the lake and the forest; but the timber is gone, and though the lake waters still yield fish, and a few farmers cultivate the land where the hardwoods once stood, Harbor Springs relies for its subsistence chiefly on the summer vacationist trade

Southeast from Harbor Springs, the alternate route follows State 131, a scenic highway along the shore of Little Traverse Bay and Lake Michigan, past several summer colonies to the junction with US 31, 41 *m.* (*see below*).

At 17 *m.* on US 31 is a junction with a side road.

Left on this road to placid DOUGLAS LAKE, 3.5 *m.*, four miles long and two-and-a-half miles wide, in the midst of wooded country. Fairy Island, numerous coves, smooth sand beaches, and good fishing attract a large colony of vacationists. Housed in 100 buildings, on a 3,000-acre forested tract bordering Douglas Lake, is the UNIVERSITY OF MICHIGAN BIOLOGICAL STATION. It was established in 1909 to facilitate field work in botany and zoology for selected groups of students.

At PELLSTON, 18.5 *m.* (601 alt., 810 pop.), settled in 1882, is the JACKSON TINDALL MILL, one of the few large lumber mills in northern Michigan that have not been dismantled. BRUTUS, 22.5 *m.* (89 pop.), dates from a stagecoach stop of 1874.

Right from Brutus on County 640 to a MENNONITE CHURCH (*visitors welcome*), 1 *m.*, built in 1877, which serves the Mennonite settlement in the farm area near Pellston and Brutus. The Mennonites, a sect founded in Switzerland

by Menno Simonis (1492-1559), a Dutch reformer, do not countenance the use of telephones, buttons, electric lights, automobiles, flowers for the dead, or musical instruments in the church. The men's suits, of somber colors, are made by Mennonite tailors in Lancaster County, Pennsylvania, according to a prescribed style, with hooks and eyes in place of buttons. The Mennonites are of German extraction and use that language extensively in their homes. The families here came from colonies in Canada, Pennsylvania, and Indiana about 1875, attracted by the farm land thrown open to settlement. Recently a schism has occurred, younger members have formed the New Order and have discarded many of the stricter practices and doctrines of their orthodox elders. The seats and pulpit in the church, carved of basswood, are neither painted nor varnished; repeated scrubblings have given the wood a silvery sheen. The Old Order holds services at 10 A.M. each Sunday; the New Order holds three services on alternate Sundays.

The privately owned OTTAWA TROUT PONDS (L), 24.5 m., formed by damming spring waters, are stocked with brook and rainbow trout. Customers may catch any amount of fish regardless of season or limit (*tackle and bait furnished; charge of \$1 a pound for the total catch*). Approximately 3,000 fish are bought annually by leisure-loving anglers.

ALANSON, 26 m. (608 alt., 287 pop.)—a bank, a school, several stores, and a few dwellings—is on Crooked River, the connecting waterway between Burt Lake (*see Tour 12a*) and CROOKED LAKE (L), which is bordered by a continuous row of cottages.

ODEN, 29 m. (97 pop.), is composed mostly of summer cottages. The ODEN STATE FISH HATCHERY (R), 30 m., the second-largest trout-rearing station in the State, was built on this spot to take advantage of the cold spring water feeding into Crooked Lake.

CONWAY, 31 m. (72 pop.), formerly the western terminus of the Inland Waterway (*see Tours 11a and 12a*), is a popular summer resort.

BAY VIEW ASSEMBLY, 35 m., founded by the Methodist Church in 1876, is built on high terraces overlooking Little Traverse Bay. The winding streets are shaded by beautiful trees, and the old-fashioned houses, with their ornamental cornices and high gables, are surrounded by well-kept lawns and gardens. In addition to the 500 cottages of the assembly, there are tennis and shuffleboard courts, ball parks, and golf links. Every year, a series of religious and educational programs is given in the JOHN W. HALL AUDITORIUM. The Bay View Musical Festival (*third week in August*) is distinguished for its guest artists. An accredited summer school (*classes visited by arrangement*), beginning in mid-July for a term of five weeks, offers academic and musical courses.

PETOSKEY, 37 m. (656 alt., 5,740 pop.), is the metropolis of Little Traverse Bay. A busy place at all seasons of the year, its activity reaches a peak during July and August. Petoskey is the English approximation of Bidasisga (*Rising Sun*), the name of the Indian chief who owned most of this area when settlers arrived in 1852.

The diverse industries of Petoskey produce lumber, flooring, paper pulp, flour, leather, cement, lath, ties, maple blocks, and pickles. The city owns the electric light and power plant and the courthouse, which

it leases to the county. Each year, usually in February, the city sponsors the Petoskey Winter Carnival, with skating races, figure-skating contests, and a fox hunt over a wintry course. A Winter Queen, selected to reign over the carnival, sits in arctic majesty on an elaborate throne made of 750 tons of ice, illuminated at night by colored lights glowing from concealed crevices. Special 'snow trains' bring many visitors from down-State cities during the festival week-end. WINTER SPORT PARK (*free*), center of the festivities, has a double-track, 1,500-foot toboggan slide, two skating rinks, a ski jump, and a bobsled run (*equipment may be rented*). In ARLINGTON PARK, summer recreational center, are the municipal tennis and shuffleboard courts and a giant checkerboard, built of colored cement and illuminated at night (*reservations at city hall for use of tennis courts*). On Little Traverse Bay, in the western section of the city, is 13-acre MAGNUS STATE PARK (*camping facilities*). Thickly covered with a growth of hardwood and pine, the park faces the bay from a 50-foot bluff.

Petoskey is at a junction with State 131 (*see Tour 14a*).

At the summit of GREENSKY HILL, 49.5 m., named for an Ottawa, a sign, 'Methodist Mission 1863,' marks the entrance to a field adjoining the highway. In the center of the meadow are the COUNCIL TREES OF THE OTTAWA, symbols of a peace made long ago by 30 chiefs of the regional tribes. Each chief planted a tree and vowed that as long as it grew and bore leaves, he would remain at peace with his allies. The saplings were bent and tied with basswood thongs, so that each tree as it grew formed a right-angle step. The vicissitudes of time and chance have left only 9 of the 30 trees. A short distance beyond the Council Trees is the GREENSKY HILL INDIAN MISSION, reached by an earth road through a thick hardwood growth. Bordering an old Indian burial ground, the Mission is built of square hand-hewn timbers held firmly together by dovetailed corners.

CHARLEVOIX, 54 m. (592 alt., 2,247 pop.), was named in honor of the French explorer, Pierre François Xavier de Charlevoix. The city owes its popularity as a resort to the three lakes on which it fronts: Lake Michigan; Lake Charlevoix, the third-largest inland lake in the State; and Round Lake, which has a fine land-locked harbor for pleasure craft. On a terraced ridge sloping back from the shores of Round Lake, modern summer homes contrast with older houses.

The early settlement, which occupied the site of an Indian village, was known as Pine River, and in 1853 was the scene of a skirmish between the first mainland settlers and the Mormons from Beaver Island (*see Beaver Archipelago*). The trouble was precipitated by a Mormon sheriff and a party of deputies, who attempted to subpoena three Pine River fishermen for a circuit court session on the island. With feeling already running high against the Mormons, the men of the fishing colony refused to give up their friends. A shot fired by one of the Mormons was answered by a volley from the fishermen, and the Mormons fled to their boats with six wounded. Known as the Battle

of Pine River, the incident caused the fishermen to abandon the colony for nearly a year, in fear of reprisal by the islanders.

In 1876, after the dredging of Pine River, which connects Round Lake with Lake Michigan, Charlevoix was declared a port of entry and quickly became one of the busiest ports on the Great Lakes. Lumber mills were erected at several points on the Lake Charlevoix shore. Docks were piled high with cordwood for fueling steamers; and millions of feet of lumber, thousands of laths, ties, cedar posts, and poles, and tons of bark, pig iron, and fish passed through the port. Commerce declined from 234,120 tons in 1910 to 24,882 tons in 1925; today, it is almost nil.

At the PUBLIC BATHING BEACH on Lake Michigan is the CHARLEVOIX COAST GUARD STATION (*visitors welcome*), where a crew of ten men drill daily. Near by is the U. S. FISH HATCHERY (*open*). The CHARLEVOIX TOURIST CAMP (*overnight fee 25¢*), at the west end of Park Ave., overlooking Lake Michigan, provides electric lights, running water, shower baths, and stoves.

Within easy reach of Charlevoix are connecting waterways, upon which canoe trips of several days' duration are often made. Canoes may be rented in Charlevoix and East Jordan, and arrangements made for trucking them to the selected point of departure. One such trip starts at Beal's Lake, eight miles east of Central Lake Village; swings in a rough figure-S through the Intermediate Lakes to Lake Bellaire; passes through Grass River, Clam Lake, Torch Lake, Torch River, Little Round Lake, and Elk Lake; and ends at Elk Rapids on Little Traverse Bay. From Charlevoix a boat line operates to St. James, Beaver Island (*see Beaver Archipelago*).

Left from Charlevoix on State 66 is IRONTON, 7 m. (106 pop), of local importance as an iron-manufacturing center in the latter part of the nineteenth century. It is the terminal of the IRONTON FERRY (*passage free*), which crosses the South Arm of Lake Charlevoix South of the ferry is the Isle of Pines, or HOLY ISLAND (R), where the Mormons held their Feast of the First Fruits.

Right (S) from Ironton on State 66 to EAST JORDAN, 15 m. (600 alt, 1,523 pop), curved around the head of Lake Charlevoix's South Arm and divided by the Jordan River into two sections. The eastern half clings to the hillsides like an Alpine village, but the western section, through which the highway passes, is on level ground. The two halves, connected by a bridge across the Jordan, were originally distinct settlements, East Jordan and South Arm. The two were incorporated as one village in 1887 and as a city in 1911. Formerly a lumber port of consequence, East Jordan today sustains itself by operating a canning factory and a creamery and catering to an increasing tourist trade. In the vicinity are 75 miles of streams, where brook, brown, and rainbow trout may be taken; in Lake Charlevoix are perch, bass, pike, smelt, mackinaw and steelhead trout.

A MUNICIPAL TOURIST PARK is on the west side of the South Arm of Lake Charlevoix. Like many cities in this section, East Jordan sponsors an annual Smelt Jamboree (*usually in late March*), which in 1938 attracted 11,000 visitors from 15 States and several Canadian provinces. Among the events are the coronation of the King of Smelts, the Smelters' Parade, a Smelt Banquet (stag), reading of the King of Smelts' proclamation, a fireworks display that signals the 'Charge of the Night Brigade,' and the Smelters' Ball at the Armory.

South of Charlevoix, US 31 traverses rolling country and, at 69.5 m., ascends a high hill overlooking green slopes and blue waters. Grand Traverse Bay stretches far to the west, with the high hills of Leelanau County as a background; to the southwest, the east and west arms of the bay are separated by Old Mission Peninsula; and straight ahead is Torch Lake, visible through the trees.

TORCH LAKE VILLAGE, 73.5 m. (25 pop.), now a summer resort, was once a headquarters for lumbering operations. TORCH LAKE was so called because the Indians speared fish there at night by torchlight. The white sand beaches and the dark green trees on its banks make an effective setting for its translucent, spring-fed waters that vary in color from the palest of blue, close inshore, to a cobalt blue that is almost purple, in the center where the lake reaches a depth of 300 feet. Resort developments, private summer homes, bungalow camps, and tourist parks line the shores. Each Sunday morning and afternoon, the Torch Lake Yacht and Country Club holds races.

KEWADIN, 84.5 m. (150 pop.), on Elk Lake within reach of Birch Lake, Torch Lake, and Grand Traverse Bay, was named for Chief Kewaydin (northwest wind), who formerly resided here. In the home of the Indian Mamagona is a COPPER KETTLE three feet in diameter, found by his ancestors at Cadillac on Lake Mitchell. Shaped from a solid sheet of copper, it is large enough to hold the carcass of a bear or a deer. When found, a smooth round stone, with which, it is said, the kettle was shaped, lay inside the vessel, with fine flakes of copper imbedded in it.

The summer resort village of ELK RAPIDS, 87.5 m. (596 alt., 615 pop.), was settled in 1852 around a sawmill operated by the power of Elk River. A charcoal iron furnace and chemical plant utilized the timber resources of the region.

TRAVERSE CITY STATE PARK, 103 m. (*camping, bathhouse, electricity*), is a 22-acre tract fronting Grand Traverse Bay. The land was given to the State in 1920 by the Traverse City Chamber of Commerce.

At 105 m. is a junction with State 42.

Right on State 42 (Queen's Highway) to OLD MISSION PENINSULA, a 17-mile finger of land thrust into Grand Traverse Bay. In the peninsula's prolific cherry orchards, there are about 20,000 trees to the square mile, the greatest concentration of cherry trees in the United States. The Blessing of the Blossoms (*early summer; two one-hour tours through orchards daily*) is held as a prelude to the Traverse City Cherry Festival.

The road caps the crest of a hill, 25 m., affording a panoramic view of the countryside East and west are the arms of Grand Traverse Bay, the peninsula itself stretches away to the R; straight ahead is FORD'S ISLAND, the only piece of land in the bay which still has virgin timber. Originally known as Marion Island, it was bought in 1922 by Henry Ford.

On a platform 335 feet above the bay is FREDERICK'S TOWER (R), 8.5 m., which offers a comprehensive view of the peninsula.

OLD MISSION, 16 m. (100 pop.), is the site of the first white settlement in the Grand Traverse region. In 1839, the Reverend Peter Dougherty established a Presbyterian mission here, in a log cabin, which he replaced four years later by the present MISSION HOUSE.

North from Old Mission on an earth road (*deep holes*) through a stand of tall hardwoods to OLD MISSION LIGHTHOUSE, 19.5 m., at OLD MISSION POINT. An automatic light has replaced the keeper and his lamp. The 45th parallel of latitude touches the lighthouse site, exactly halfway from the equator to the North Pole.

TRAVERSE CITY, 107 m. (612 alt., 12,539 pop.), Grand Traverse County seat and center of the Michigan cherry-growing region, is widely known for its three-day National Cherry Festival. French trappers who came here by way of the Straits of Mackinac in the late 1600's must have recognized the value of the soil and climate, for evidences of cleared lands and apple orchards were found 200 years later. Apples were the first commercial crop, the yield increasing from 5,000 bushels in 1875 to 500,000 in 1903. In the 1880's, a one-acre cherry orchard began to bear abundantly, and in the following decades the forerunners of the present orchards were set out. The expansion of cherry culture was stimulated in 1907, when the Traverse City Canning Company was equipped to can cherries. Of the more than a million cherry trees in this region, 95 per cent bear sour varieties.

Traverse City had its beginning in 1847, when the Boardmans, father and son, bought 200 acres of pine-covered land and built a mill near the mouth of Mill Creek. In 1851, three men headed by Perry Hannah bought out the Boardman interests. Under the new leadership, docks were erected on the bay to accommodate large lake vessels, new mills were built, and several bridges were constructed across the river.

The sawmill village with sawdust streets became a stable community and was incorporated as a city in 1895. Cherry growing became commercially important just in time to save the city from the stagnation and decline that overtook many Michigan communities when the lumber mills closed. Today, in addition to handling the cherry crop, Traverse City manufactures or processes potato products, canned goods, cider, furniture, coffins, cast-iron articles, sprayers, and planters.

The temperate summer, with its pollen-free breezes, is a boon to sufferers from asthma and hay fever. Two golf courses, three municipal bathing beaches, and tennis and shuffleboard courts draw thousands of pleasure seekers to Traverse City. Scores of lakes offer good fishing. BOARDMAN LAKE, 600 acres in area, lies partially within the city limits and is connected with the West Arm of Grand Traverse Bay by the BOARDMAN RIVER, a trout stream. Trolling for Mackinaw trout in Grand Traverse Bay has recently become a very popular sport (*boats available*). In winter, fishing through the ice draws many anglers.

CLINCH PARK, at the foot of Cass Ave., between the business district and the bay shore, contains a MINIATURE OF TRAVERSE CITY. All buildings are constructed to scale, and the scores of tiny lawns are studded with Japanese dwarf trees. So exact are the details that photographers take an 'aerial picture of Traverse City' from a height of three feet. The park also has an AQUARIUM, containing specimens of all the fishes found in local waters, and a SMALL ZOO, with an excellent collection

of wild life native to Michigan. An outdoor LOGGING EXHIBIT features a locomotive of the type used on Michigan's old logging roads. The CON FOSTER MUSEUM, in Clinch Park, the hobby of Con Foster, a retired circus man and former mayor, includes Indian handicraft, arrowheads and spearheads, beadwork, pottery, carvings, and a large collection of guns. A living reminder of Indian days is the deformed TRAIL-MARKER TREE, east of the courthouse on the north side of Washington St., which follows the line of an old trail.

Traverse City is at a junction with State 22 (*see Tour 15A*).

Section b. TRAVERSE CITY to MUSKEGON; 151 m. US 31.

South of TRAVERSE CITY, 0 m., the route cuts across the base of the Leelenau Peninsula and then turns due south to follow the shore line of Lake Michigan. Throughout this section, which is the most important part of the Michigan fruit district, are many orchards, producing, besides other fruits and berries, a major portion of the State's cherries and peaches. The section also is important for its summer recreational facilities; dozens of resorts line the shore, and the inland lakes and streams are stocked with a variety of game fishes. A phenomenon of the Lake Michigan shore are the sand dunes, which in many instances are creeping slowly inland under the lash of the prevailing westerly winds. On the inland side of the dunes are many small lakes, most of them connected by an outlet with Lake Michigan. Because of the good harborage they afford, the War Department has widened and deepened some of their outlets and protected them by breakwaters and piers.

GRAWN, 8.5 m. (150 pop.), created by the lumber industry, is a shipping center, with a large warehouse and loading dock for potatoes and other produce. Large quantities of pulpwood from the surrounding territory are marketed here.

At 12.5 m. is a junction with State 137.

Left on State 137 is INTERLOCHEN, 1 m. (80 pop.), headquarters of NATIONAL HIGH SCHOOL ORCHESTRA AND BAND CAMP (R), 2 m., a nonprofit summer school of music for high-school students and alumni. The camp property of 400 acres, with more than 100 buildings, lies between LAKE WAHBEKANESS, on which is the boys' division, and LAKE WAHBEKANETTA, where the girls' division and camps are situated. Students, numbering about 300 and coming from every State in the Union, are housed in cottages and dormitories. Programs, often directed by famous orchestra leaders, are given in the concert bowl (*concerts, Wed and Sun. aft and Sun eve.; Sun concerts broadcast over NBC*). INTERLOCHEN STATE PARK (*camping facilities*) is a tract of 278 acres of virgin pine, facing upon two lakes.

BEULAH, 30 m. (595 alt., 350 pop.), on CRYSTAL LAKE (*bathing beaches*), is the business section for the adjacent tourist region. The smelt runs that have become common on the Great Lakes began at Crystal Lake in 1922. When the run starts, there is scarcely water enough in Cold Creek, which flows through Beulah, to contain the millions of silver fish that, having deserted the lakes, madly push their

way upstream to spawn. The smelt—a tasty pan fish, from four to ten inches in length—were planted in Crystal Lake in 1912 as a supplementary food supply for Mackinaw trout. Ten years later astonished residents witnessed the first of these amazing runs.

The runs soon attracted so much attention that Beulah merchants, in order to handle the numerous sightseers and sportsmen, as well as to protect the smelt and secure the continuance of the runs, inaugurated in 1925 the annual Beulah Smelt Run Festival (*late in March or early April*). Walks with guard ropes are built along the banks of the creek, and strings of lights are hung, as smelt run only at night. The dippers, men and women alike equipped with nets, wade into the choked stream. The lights are flashed on as a signal for a few minutes of fishing; then a rest is declared for both men and fish, the 'takes' alternating with the rests from late evening until dawn. The 'take' is enormous; one year about 4,000 people netted 15 tons of smelt in 10 minutes. As part of the festival, banquets, comic parades, and contests are held, and the result is a good-natured burlesque of more serious festivals.

Lately the winter sport of smelt hooking has begun to rival the spring dipping, in part because the season is longer, beginning as soon as the lake is solidly frozen over. Transportation to the fish shanties from shore is by automobile, and there is a continuous line of cars coming and going (*taxi service available*). Fishing cabins, accommodating up to ten people, are equipped with every necessity. Here, as elsewhere, a miniature city springs up on the ice, complete even to grocery stores and supply shops.

BENZONIA, 31 *m.* (800 alt., 632 pop.), the first settlement in Benzie County, was platted in 1857 by a Congregational minister, to establish 'a Christian Colony and Institution of Learning.' The college closed in 1918, and one of the two original buildings, a girls' dormitory, is now in use as the MILLS COMMUNITY HOUSE. Containing a library, club rooms, auditorium, and gymnasium, it is the center of village community life.

BEAR LAKE VILLAGE, 46 *m.* (712 alt., 325 pop.), a tourist trading center, is also busy in summer and fall with the shipping of cherries, berries, and apples from surrounding farms and orchards. The village, in common with thousands of other communities in the State, wrote its history in lumber. Strung out along the shore of BEAR LAKE (R), it has a memento of lumbering days in (R) HOPKINS PARK (*camping facilities*), a property developed on the huge fills of sawdust and slabs that accumulated during the days when nearly a mile of waterfront mills handled the regional output of timber.

At 58 *m.* is the southern junction with State 22 (*see Tour 15A*).

MANISTEE (Ind., spirit of the woods), 63 *m.* (600 alt., 8,078 pop.), surrounding the large harbor at the mouth of the Manistee River as it enters Lake Michigan, was developed largely by Swedes and Norwegians, whose descendants represent about 35 per cent of the population. It was once the site of a permanent camp of 1,000 Chip-

pewa, whose village name it retains. The FIFTH AVENUE BEACH PLAYGROUND has one of the finest beaches on Lake Michigan.

A minor industrial city and a shipping center for the surrounding fruit country, Manistee was once the scene of some of the most roaring, river-choking timber drives in the State. Lumbermen of the Manistee region are generally credited with originating the 'round forty' plan of cutting timber, which, with variations, was widely used in the Michigan pine woods. A lumberman would buy 40 acres of standing timber and cut the trees, not only on his own land, but also on as many of the surrounding forties as he could get out in a season. The original 40 thus became the center of a round tract that might encompass a section or more before the owner of the surrounding land became aware of the operations.

The Manistee National Forest Festival, begun in 1936, is held each year during the first four days of July, to publicize and dramatize the work of intensive reforestation being undertaken in this area, and to recall the days when the city was the hub of white pine lumbering in the Manistee Valley. Reminders of pioneer days are the Ottawa Indian village, numerous descendants of original settlers who live in this region, and the relics to be seen in a large museum. There is also a historical parade in which authentic costumes are worn by the townsfolk. Tours through the Manistee National Forest, fire fighting and planting demonstrations by the U. S. Forest Service, lumberjack contests, band concerts, folk dances and a ball, fireworks, fishing contests, and special water events are staged for the entertainment of visitors. Reminders of Manistee's lumbering heyday are the many frame mansions—great houses in the flamboyant Victorian manner—crowning the hills and lining the higher streets, overlooking the long harbor. The manufacturing district is along the shore of Lake Manistee. After the river had been dredged, the harbor increased in importance, and the volume of trade passing through the port has contributed materially to the community's resources.

The SMITH STREET MEMORIAL BRIDGE, by which the highway crosses the Manistee River, is the State's largest jackknife type of bridge.

OAK HILL, 64 *m.* (150 pop.), a hilly suburb overlooking Manistee, is a Polish settlement built up by early mill workers. It has its Roman Catholic church, school, and other organizations. Here is the home of E. G. Filer, millionaire lumber operator, who owns FILER CITY, 65 *m.* (320 pop.), site of the FILER FIBRE PLANT, which manufactures pulp paper and chemicals. This establishment consumes 300 tons of wood, 100 tons of coal, 15 tons of lime, and 11 tons of salt cake each day; the water used is sufficient for a city of 10,000 persons. In addition, the company markets 10,800 tons of waste lime each year, which farmers use to sweeten the soil.

SCOTTVILLE, 85 *m.* (679 alt., 1,002 pop.) (*see Tour 5c*), is at a junction with US 10 (*see Tour 5c*), with which US 31 is united to the outskirts of LUDINGTON, 91.5 *m.* (587 alt., 8,898 pop.) (*see Tour 5c*).

PENTWATER, 106 *m.* (585 alt., 772 pop.), on the Pentwater River, is a busy port from which are shipped cherries, apples, pears, plums, gooseberries, currants, raspberries, and strawberries. Mennonites, whose stringent rules as to dress and conduct are still observed by older members, have had much to do with the successful development of the fruit industry here.

Charles Mears, a Chicago capitalist, walled off the outlet of the stream that wandered among the dunes to join Lake Michigan near the northern boundary of the present Charles Mears State Park; dug a channel to the lake; and later, when a wide strip of clay was discovered along the Pentwater River, built a tile and brick factory. Mears, known as the 'Christopher Columbus of the West Coast,' built and sailed his own vessels, constructed and operated his own saw-mills, opened harbors, and conducted his own buying and selling. His mill boardinghouses were 'as neat as a New England farmhouse.' The CHARLES MEARS STATE PARK is a lightly wooded 15-acre campground, on the shore of Lake Michigan within the village limits.

HART, 114 *m.* (655 alt., 1,690 pop.), is a strategic center of a region devoted almost exclusively to fruit growing. Highways leading into the village are lined with orchards, and from late June onward, when cherries are ripe, almost every other house offers them for sale in one form or another: pies fresh from the oven; boxes of neatly packed fruit; cider and cordials at wayside stands; and cherries straight from the canning kitchens of homes or factories. The largest ARTESIAN WELL in western Michigan, with an output of 1,000 gallons a minute, is in Hart.

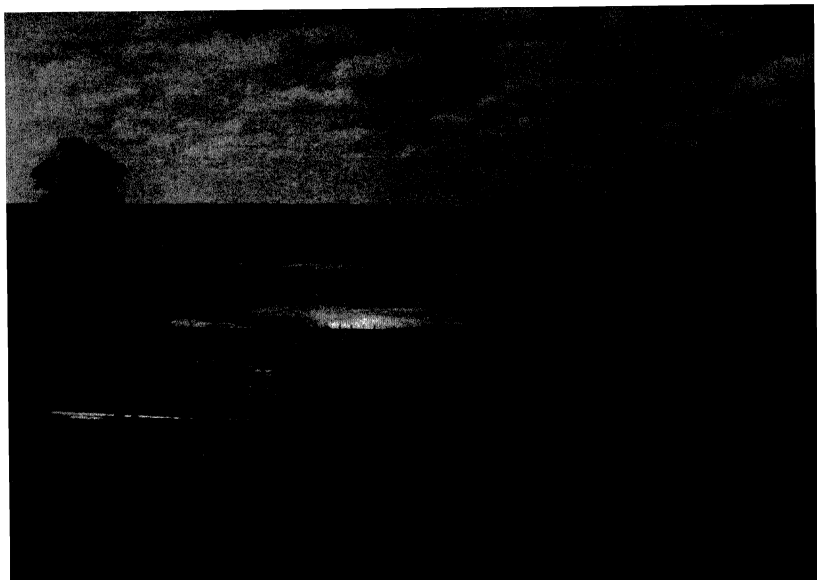
Right from Hart on County 570 (Main Street) is MEARS, 4 *m.* (912 pop.), where Swift Lathers publishes the *Mears Newz*, a weekly printed from handset type on a letter-size sheet and containing straightforward and outspoken local news and comment. The *Newz* has a wide circulation outside of Mears, among readers interested in unusual journalism.

SILVER LAKE STATE PARK, 9 *m.*, on SILVER LAKE, is a camping area in the midst of one of the largest dune districts along Lake Michigan. These sand formations, sprinkled lightly with vegetation, sweep to a height of more than 400 feet above the lake. An almost continuous series of parks is being developed along the dunes between this point and Pentwater.

SHELBY, 121 *m.* (807 alt., 1,152 pop.), surrounded by orchards and dairy farms, derives the major portion of its income from these sources. At one time the village was widely known among hunters and sight-seers for the yearly migrations of passenger pigeons that crossed here by the millions, literally darkening the sky. One year, more than 700,000 birds were massacred—an example of the slaughter that resulted in the extermination of the passenger pigeon in America. Now the county maintains sanctuaries for wild life.

MONTAGUE, 135 *m.* (578 alt., 887 pop.), is one of two municipalities at the head of WHITE LAKE (*boating, swimming, fishing*). It has a foundry and a canning factory and is the shipping point for large quantities of navy beans. In winter, fishing shanties are erected

The Farmlands

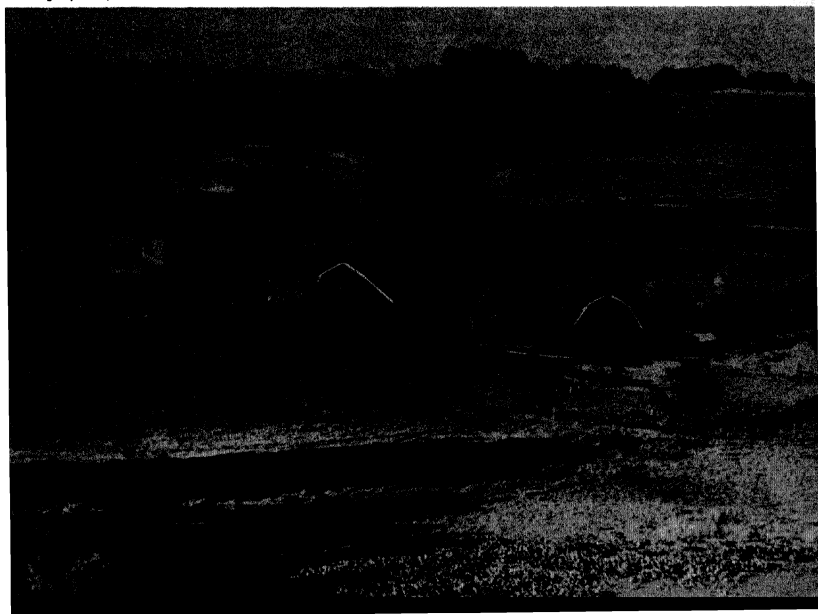


Photograph by courtesy of Farm Security Administration

THE FARM

Photograph by Wilson; courtesy of Work Projects Administration

TYPICAL FARMSTEAD





Photograph by courtesy of Benton Harbor News Palladium
IN THE ORCHARD COUNTRY NEAR BENTON HARBOR

CHERRY PICKERS, TRAVERSE CITY



IN A CHERRY CANNING PLANT, SODUS

Photographs by Vachon; courtesy of Farm Security Administration





Photograph by courtesy of Holland Chamber of Commerce

TULIPS IN BLOOM



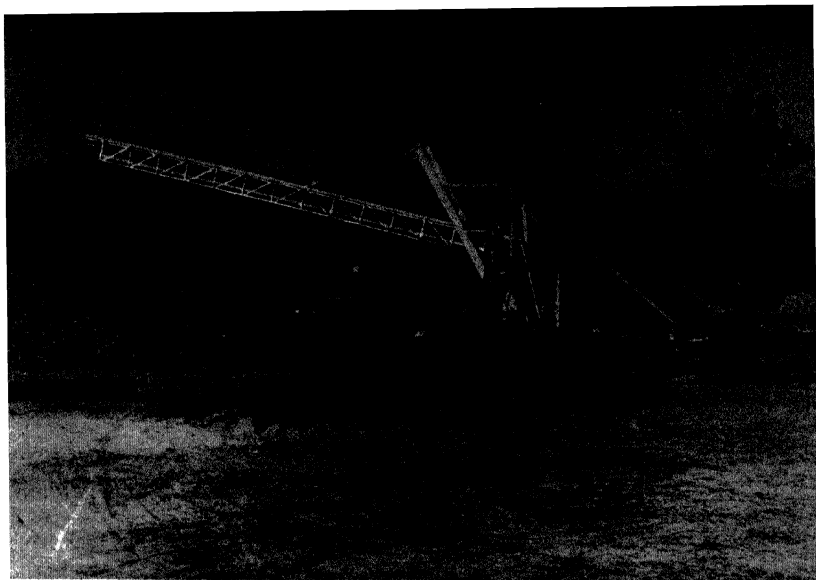
WHEAT FIELD

Photograph by courtesy of Department of Agriculture

HARVESTING CELERY, KALAMAZOO

Photograph by courtesy of Kalamazoo Chamber of Commerce

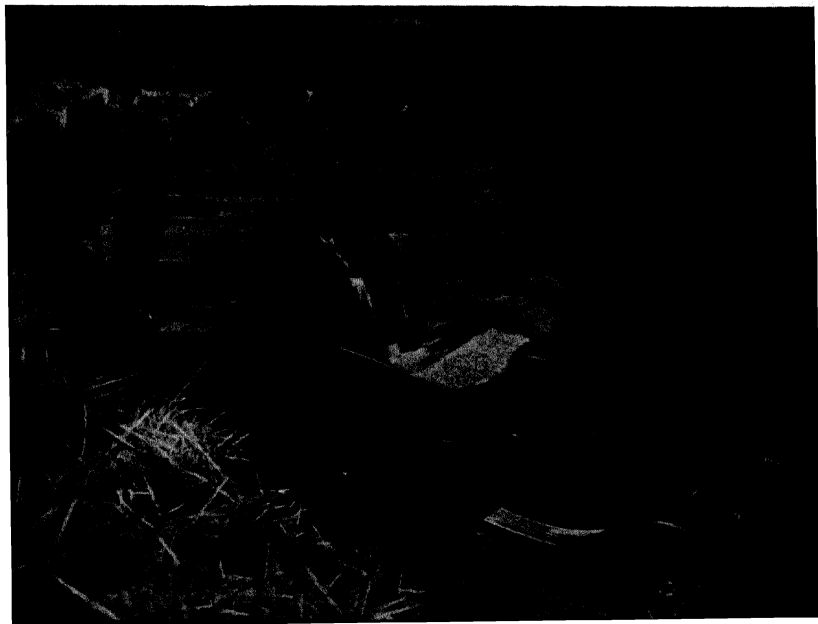


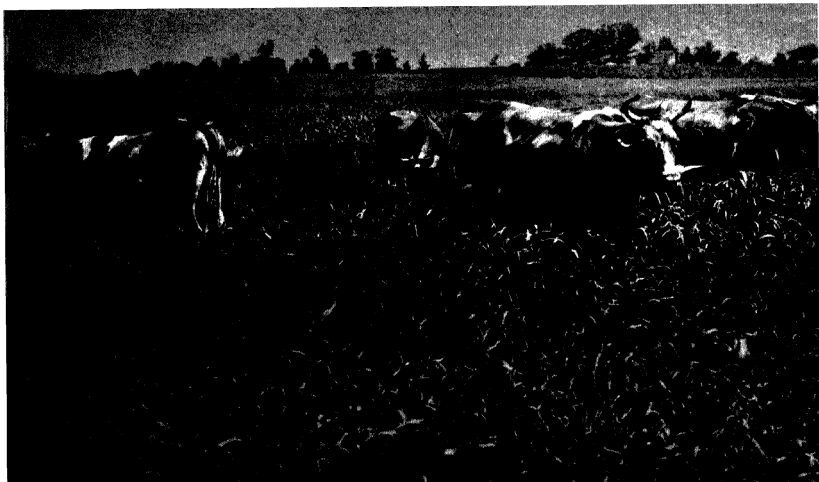


SUGAR BEETS AT REFINERY

Photograph by courtesy of Ford Motor Company

THRESHING



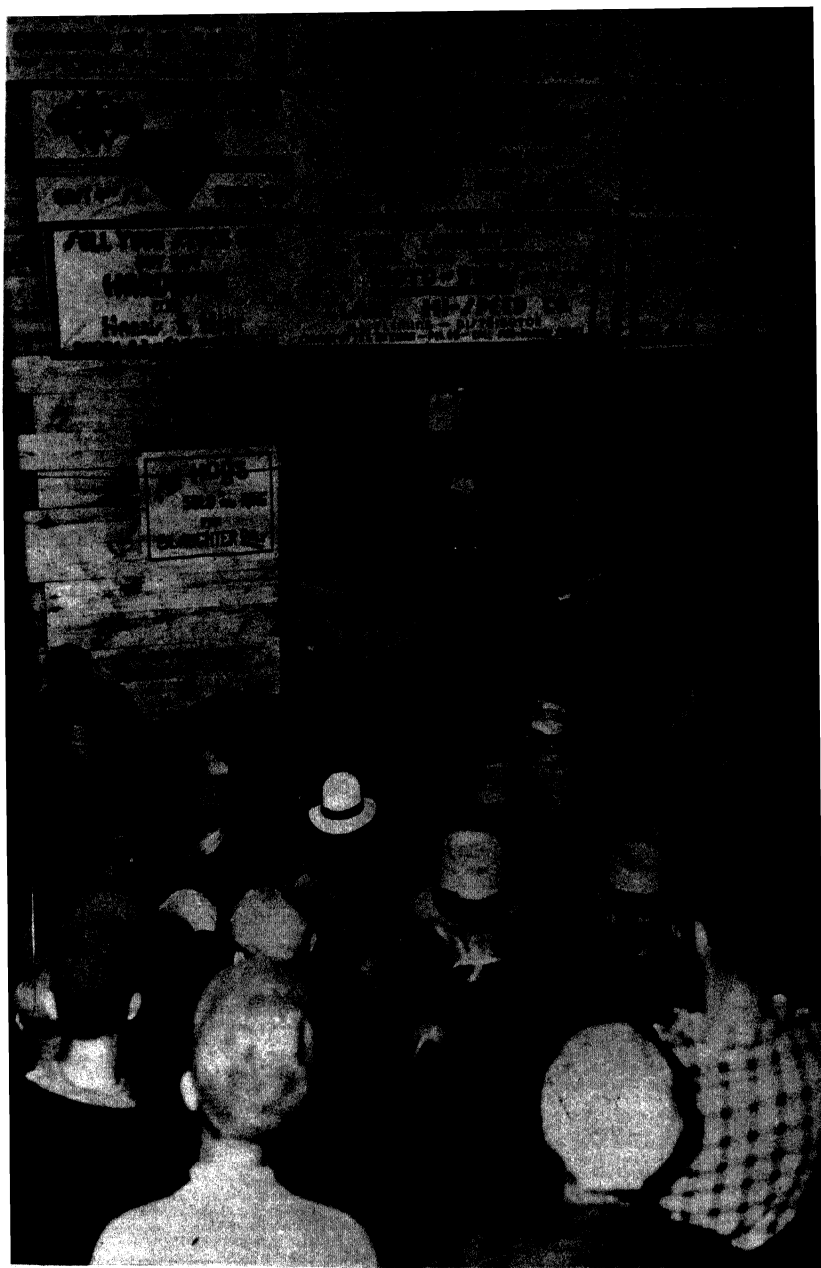


Photograph by courtesy of Department of Agriculture
GUERNSEY COWS IN SUDAN GRASS PASTURE, KALAMAZOO COUNTY

FEEDING THE PIGS

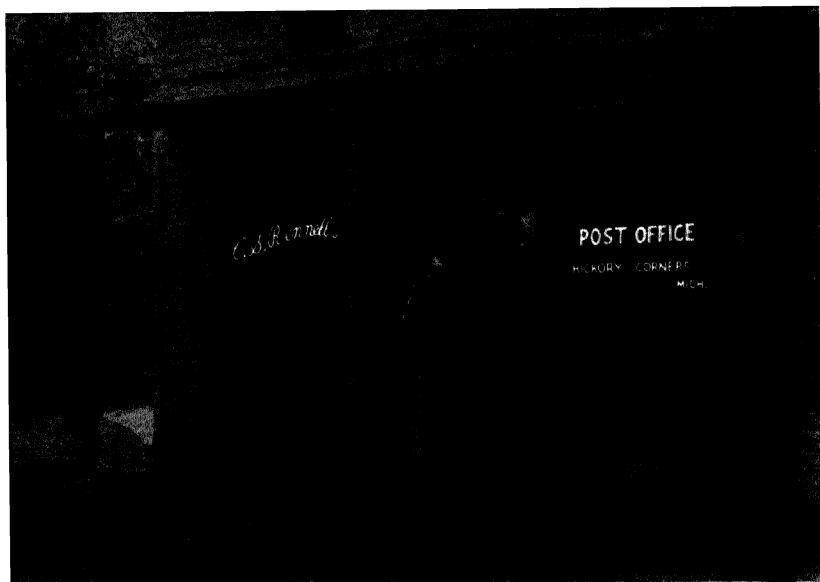
Photograph by courtesy of Michigan Art Project





Photograph by Wilson; courtesy of Work Projects Administration

AN AUCTION AT CLARE STOCK YARDS

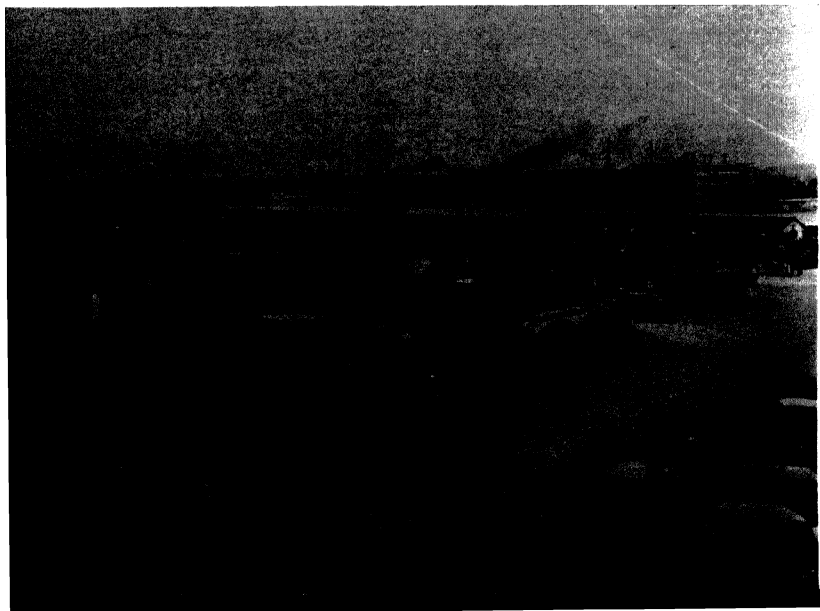


CROSSROADS STORE

Photograph by courtesy of U. S. Forest Service

PUBLIC MARKET, GRAND RAPIDS

Photograph by courtesy of State Department of Agriculture



in such numbers on the lake as to form one of the State's most populous 'cities' on the ice. The estimated number of shanties during one recent winter was 2,500.

WHITEHALL, 136 *m.* (599 alt., 1,394 pop.), is Montague's rival community at the head of White Lake. Fruit raising is a major occupation. In the taproom of the COLONIAL INN (L) is a collection of early lumbering tools and pictures of logging scenes.

At 149 *m.* is a junction with State 20.

Right (W) on State 20 to MUSKEGON STATE PARK (*camping, electricity, store, bathhouse*), 7 *m.*, a 1,197-acre tract fronting Lake Michigan, Muskegon Lake, and Muskegon Channel. Dense pine and hardwood forests cover most of this dune area. Atop the highest crest rises a massive log blockhouse erected by the CCC as a lookout.

MUSKEGON, 151 *m.* (625 alt., 41,390 pop.) (*see Muskegon*).

Muskegon is at a junction with State 46 (*see Tour 7b*).

Section c. MUSKEGON to the INDIANA LINE; 118 *m.* US 31.

The route continues southward from MUSKEGON, 0 *m.*, along the Lake Michigan shore. In the southwestern section of the State is Holland, consciously Dutch and proud of its tulips; at Benton Harbor, the home of the House of David, US 31 leaves the lake shore, turning southeast toward Niles and the Indiana Line.

MONA LAKE (R), 4.5 *m.*, carries the drainage waters of central Muskegon County into Lake Michigan. Bluegills, perch, pike, and small-mouth bass are plentiful.

At 14.5 *m.* is a junction with US 16 (*see Tour 4b*).

GRAND HAVEN, 15.5 *m.* (590 alt., 8,345 pop.), seat of Ottawa County, advantageously situated at the mouth of the Grand River, possesses an excellent harbor. SPRING LAKE, seven miles long, with many narrow inlets, is adjacent to Grand Haven and is the connecting link between the Grand River and Lake Michigan. A manufacturing and shipping center, as well as a popular resort, Grand Haven ships an average of 1,200,000 crates of freight, largely grapes and celery, to Chicago yearly. The celery produced annually is valued at more than \$2,000,000. Commercial fishing, utilizing steam tugs and sailing craft, is highly developed. The port is headquarters for the Tenth District U. S. Coast Guard and the Steamboat Inspection and Customs Service, and is home base for the U. S. Coast Guard Cutter *Escanaba*. Annually in the first week of August at Grand Haven State Park, the coast guardsmen hold a two-day Water Fete, including life-saving demonstration and salvage operations. Races are held between various units of the Michigan Coast Guard and a series of aquatic events is staged.

Between the city and Lake Michigan, among the high wooded dunes that fringe the lake for miles, is GRAND HAVEN STATE PARK (*camping, electricity, store, trailer park*), along a drive that parallels the deep-water channel connecting Grand River and Lake Michigan.

At 27.5 *m.* is a junction with the Port Sheldon Road.

Right on this road to the junction with a county road, 3.5 m.; R. here to PORT SHELTON, 5.5 m., a resort settlement on PIGEON LAKE, which empties into Lake Michigan. During lumbering days, a group of Philadelphians organized the Port Sheldon Company to establish a city that would rival Grand Haven. To create a harbor, the promoters had to dig a canal connecting the inland lake with Lake Michigan. They set up a company village, brought in engineers, carpenters, surveyors, and platted a city. Houses, stores, and an impressive hotel were built, work was started on a harbor, and a railroad was begun, but after two years the scheme failed for lack of money and settlers. The hotel was razed, and its Colonial pillars were sent to Grand Rapids, where they adorn the entrance to the art gallery.

At 32.5 m. is a junction with County 452 (Lakewood Blvd.).

Right (W) on this road to a junction with Ottawa Beach Road, 2.5 m.; L. to HOLLAND STATE PARK (*camping, electricity, store*), 7 m., a 44-acre tract fronting Lake Michigan and Holland Channel, donated to the State in 1926

HOLLAND, 34 m. (612 alt., 14,346 pop.) (*see Holland*).

Holland is at a junction with State 21 (*see Tour 6b*).

Between Holland and Benton Harbor the area paralleling the lake is unsurpassed in the State for its fruit orchards, especially peach and plum.

SAUGATUCK, 45 m. (700 alt., 606 pop.), a quiet picturesque resort, long the gathering place of artists, is a principal art colony of the Middle West. It is in the Lake Michigan dune country, at the end of a long-abandoned meandering canal that once gave access to Great Lakes steamers. The natural beauty of Saugatuck and the surrounding country has made the village particularly popular with landscape painters. The northern end of the village covers an ancient Potawatomi burial ground. One excavation uncovered the flexed skeletons of 15 Indians; 35 other skeletons and copper armlets, wrought stones, and birch bark strips were found in 1929 during excavations for a community hall. James Fenimore Cooper obtained much of the local color for the river scenes in his *Oak Openings* in and around Saugatuck. The VILLAGE HALL houses the SAUGATUCK SUMMER ART EXHIBIT (*free; open all season*) of paintings by resident artists. Every year, the Saugatuck Art Association sponsors an Art Ball and Costume Party in middle August.

OLD BALDY, one of Michigan's largest sand dunes, is across the channel from Saugatuck, between the Kalamazoo River and Lake Michigan. A hand-operated cable ferry, more than 60 years old, is used to cross the channel. A wooden stairway leads to the summit of the dune.

DOUGLAS, 46 m. (635 alt., 368 pop.), is so close to Saugatuck that there is no break in the rows of their cottages and resort hotels along the highway. A prominent art colony has been established on the river bank. The group of tumble-down shacks and cabins, in which the artists live with Bohemian informality, is said to have been a 'hobo jungle' before they took it over. Peach packing is an industry of some importance in the village.

GANGES, 51 m. (100 pop.), a trading center for fruit growers, was known as Pier Cove in the lumbering days, when a great pier 40 feet

in width extended more than 200 feet into the lake. At the pier half-a-dozen vessels were often loaded at the same time.

GLENN, 55 *m.* (100 pop.), once a shipping point equal in importance to South Haven, has become a busy summer resort. The community gained attention in 1938 with its bizarre Pancake Festival, a burlesque of the many fruit and flower festivals that have become so popular in Michigan. The festival, held during the last week in May, was inaugurated in 1938 to commemorate a blizzard of December 10, 1937, which blockaded US 31 and marooned more than 200 motorists and truckers in the little community for several days. When the bread supply was exhausted, the housewives of Glenn fed the refugees on pancakes; and Glenn became known as the community that fought a blizzard with pancake turners.

SOUTH HAVEN, 64 *m.* (700 alt., 4,804 pop.), one of Michigan's important ports, is a manufacturing city and a supply center for 15 resorts. In addition to its own five miles of smooth, sandy beach, there are 40 inland lakes within a radius of 20 miles. The fine harbor is a customs station and a port of entry for vessels bringing kaolin, wood pulp, and cod-liver oil from Norway, Sweden, England, Russia, and Germany. Regular steamship service is maintained to Chicago.

A deep ravine in the business section of the city has been landscaped and converted into DECKMAN PARK. OAKLAND PARK overlooks the harbor from the north side of the city. The AGRICULTURAL EXPERIMENT STATION is devoted chiefly to peach and blueberry propagation. According to the records of a missionary named McCoy, peaches have long been raised in Michigan: 'We planted peach stones,' McCoy wrote in 1826, 'and now have an orchard of two or three hundred trees.' An influx of colonists in 1836 spread peach plantings well into the interior. In 1839 a cargo of the fruit was shipped to Chicago. Harsh winters in the following decade killed inland plantings, and, since then, peaches have been confined largely to the more equable climate of the Lake Michigan shore.

The BLACK RIVER runs through the heart of the city and flows into Lake Michigan. Three miles to the east is a high, sandy ridge, which, thousands of years ago, was the beach of Lake Michigan. This ridge is covered with camp sites for several miles; hundreds of circles of burned and broken stone remain as evidence of its popularity with bygone tribes. Around the hearths, the ground is covered with chips of flint, chert, and other stone—the wastage of implement making. Nearly every sandy hill for several miles inland shows some trace of occupancy by prehistoric man. Several thousand specimens of his handiwork, including grooved and ungrooved axes, pipes, banner stones, bird stones, gorgets, arrowheads, knives, drills, and scrapers, are in the possession of local collectors or in museums.

VAN BUREN STATE PARK (*camping*), 68.5 *m.*, occupies 116 acres of wooded land and shifting sand dunes and has a broad beach along Lake Michigan. The South Haven Land Syndicate Subdivision was platted here in 1910, but the enterprise failed after a few cot-

tages had been erected. The State took over 100 acres of the subdivision in 1923, and the county donated 16. South of the park is DEVIL'S HOLE, a deep ravine in the dunes, choked with vegetation, which is believed to have been used years ago as a cache for horse thieves.

THUNDER MOUNTAIN (R), 76 *m.*, a hill of sand 125 feet high, on a plainly marked side trail, is one of the links in the chain of sand dunes along the Lake Michigan shore line. It derives its name from the low, rumbling sounds that at one time could be heard from its peak. Of recent years the thundering is seldom heard, although residents of the vicinity say that formerly it was a common occurrence. One unconfirmed theory of the thunder's origin is that caves below the water line serve as sounding boards for the roar of the waves.

BENTON HARBOR, 88 *m.* (596 alt., 15,434 pop.) (*see Benton Harbor*).

Benton Harbor is at a junction with US 12 (*see Tour 2c*).

ST. JOSEPH, 90 *m.* (591 alt., 8,349 pop.) (*see Benton Harbor*).

Southeast of St. Joseph, the route swings away from the lake shore and crosses a rolling agricultural region in which fruit is the principal crop.

BERRIEN SPRINGS, 104 *m.* (671 alt., 1,413 pop.), is the home of the EMMANUEL MISSIONARY COLLEGE (L), owned and operated by the Seventh-Day Adventists. The enrollment of approximately 500 includes many students from distant parts of the world.

NILES, 113 *m.* (800 alt., 11,326 pop.) (*see Tour 3*), is at a junction with State 60 (*see Tour 3*).

US 31 crosses the INDIANA LINE, 118 *m.*, six miles north of South Bend, Indiana.

Tour 15A

Traverse City—Northport—Leland—Glen Haven—Frankfort—Junction with US 31; 121 *m.* State 22.

Hard-surfaced and graveled roadbed, two lanes; open all year.

Manistee and Northeastern R.R. parallels route between Traverse City and Northport.

Ample accommodations.

State 22 follows the rim of triangular Leelanau Peninsula, the 'little finger' of Michigan's 'mitten' that extends into Lake Michigan to

form the western border of Grand Traverse Bay (*see Tour 15a*). The road for many miles passes through cherry orchards, in spring gay with delicate blossoms and in early summer brilliant with ripe fruit. From every hillcrest, a panorama of carefully tilled farm lands and wooded slopes, with the ever-present lake waters as a background, unfolds before the visitor's eyes. Off the western shore of the peninsula, the Manitou Islands rise, hazy green, above the horizon.

TRAVERSE CITY, 0 *m.* (612 alt., 12,539 pop.) (*see Tour 15a*), is at a junction with US 31 (*see Tour 15a*).

GREILICKVILLE, 3 *m.* (50 pop.), was first called Norristown in honor of two brothers who founded the village and later established a gristmill, a tannery, and a brickyard. Many buildings in the surrounding area are constructed of yellow brick produced from the clay of near-by CEDAR LAKE (R). There is a legend that no Indian has ventured on Cedar Lake, because of a belief that the water boils and is inhabited by monsters. The lake contains unusually large sturgeon and muskellunge, as well as the common pan fishes.

BINGHAM, 11 *m.* (20 pop.), originally was a community of some 30 houses around a sawmill, on the shore of Lake Leelanau one mile west of the highway. The present village consists of two houses, a store, a school, and a church.

SUTTONS BAY, 17.5 *m.* (600 alt., 439 pop.), is at the head of the bay of the same name, on a series of terraces that rise from the shore. During the lumbering era, it had four sawmills and six docks, the harbor being of sufficient depth to accommodate vessels of considerable draft. Its residents derive their livelihood from resorters and cottagers along the bay shore.

A GRISTMILL (R), 21 *m.*, built in 1863, is powered by water from a dam on Belanger Creek.

PRESHABESTOWN (Peshabatown), 22 *m.* (150 pop.), is the only Indian settlement on the west side of Grand Traverse Bay. Descendants of Ottawa and Chippewa, who have intermarried, occupy a row of houses along the roadside.

The hamlet of OMENA, 24.5 *m.*, according to popular belief, acquired its name from the habitual response of an early missionary, the Reverend Peter Dougherty, to any statement made by an Indian: he would exclaim in the tribal tongue, '*Omenah?*' (Is it so?). Under the Reverend Mr. Dougherty's supervision, lumber was brought across the ice from Old Mission to build a school, when the community was established by the Chippewa Chief Ahgosa. At the crossroads is a CHURCH that has held services each Sunday since its dedication in 1858. The bell is said to have been cast of pennies contributed by the Indians. Near by is an INDIAN CEMETERY. There is a large summer colony on the point of land to the east.

At 30 *m.* is a junction with the Northport branch of State 22.

Right (*straight ahead*) on this branch highway is NORTHPORT, 0.5 *m.* (700 alt., 577 pop.), an important shipping center during the last half of the nine-

teenth century. In 1906, car-ferry service between Northport and Manistique in the Upper Peninsula, established three years before, was discontinued because of ice jams, in one of which the boat was bound for a month near South Fox Island. A cherry cannery here packed 3,500,000 pounds of cherries in 1935. The village is the home port of a small fishing fleet.

North of Northport, the route follows County Road 633. At 3 *m.* is a junction with a graveled road; L. to a junction with an earth road, 5.5 *m.*

Right here 0.5 *m.* to GEORGE RAFF'S FISHING CAMP, the peninsula headquarters for Mackinaw trout trolling, the 'deep sea fishing' of the Great Lakes. Boat operators act as guides. Trollers use short poles with large reels, containing 500 to 1,000 feet of steel and copper line, to catch fish ranging up to 43 pounds.

Ahead on the graveled road to CHERRY HOME, 7 *m.*, a 300-acre cherry orchard with 15,000 trees, employing, during the picking season, 300 to 500 persons. A dormitory and cooking facilities are provided for the pickers.

On the tip of LEELANAU POINT, 9 *m.*, is GRAND TRAVERSE LIGHT, erected in 1852. Because of bad blood existing between Beaver Island Mormons and mainland fishermen in the 1850's, the keeper of this light was raided several times by the Mormons. NORTHPORT STATE PARK (*undeveloped*, 1940) is south of the lighthouse.

Left from the junction, State 22 follows a southwesterly course through the hills along the Lake Michigan shore, passing, near the northern tip of Lake Leelanau, an unfinished SAND CUT (R), 38 *m.*, made during the days when the construction of a railway between Lake Michigan and Lake Leelanau was attempted.

LELAND, 41 *m.* (350 pop.), in a district popular with artists, is a summer resort and a community of commercial fishermen, who operate ten months of the year. A power dam on the Carp River and the powerhouse beside it are on the site of a sawmill erected in 1853. At one time several sawmills were in operation, four docks supplied cordwood to steamers, and an iron furnace consumed thousands of cords for fuel. Bohemians, imported by the lumber company as laborers, settled later north of Leland. Two large masses of iron and slag in the park stand as reminders of the smelting operations carried on between 1870 and 1884. South of the dam is an Indian council tree; below the dam is a FISHING SETTLEMENT (R) of eight shanties, with nets, drying reels, docks, tugs, and other fishing gear, a sight that attracts many painters. Behind the town is LAKE LEELANAU (*bass, pan fish*), 18 miles long and navigable from end to end.

From Leland, a mailboat (*passage can be arranged*) leaves each afternoon during the navigation season for North Manitou Island and twice a week the rest of the year.

NORTH MANITOU ISLAND (*hotel*), 12 *m.* by water from Leland (60 pop.), is owned almost entirely by a syndicate of Chicago businessmen, who control fishing rights and maintain the island as a preserve for a herd of about 250 deer. Some farming is carried on, and there are also five large cherry orchards. North Manitou Island, as well as South Manitou Island (*see below*), is heavily timbered, some of it with virgin growth. The rolling terrain reaches an elevation of 250 feet at a sand dune near the south end.

An Indian legend accounts for the name (*manitou*, or spirit) of the island group. Long ago a powerful tribe from the Upper Peninsula attacked a Lower Peninsula tribe, killed all but seven warriors, and retired to the islands. The seven followed the victors and, in the darkness, almost wiped out their con-

querors. The slaughter was blamed on evil spirits, and no Indian could be induced to live on the islands thereafter. A LIGHTHOUSE is no longer occupied, and the COAST GUARD STATION is manned by a crew of only three men.

State 22 passes Good Harbor Bay and cuts between two hills: PYRAMID POINT (R), a high sandy bluff that has been the scene of many wrecks, and SUGAR LOAF (L), reached by a footpath, one of the highest hills in the county. GOOD HARBOR, 48 m., is a ghost village marked by the dimming outlines of a few cellar holes on benchland (R) near the highway.

At 59 m. is a junction with County 616.

Left on this road to FISHER'S SAWMILL (R), 1 m., set back from the road on the winding Crystal River. It is one of the few remaining water-powered mills in the State. A parking space at LOOKOUT POINT (R), 2.5 m., known locally as Miller's Hill, affords a view of Glen Lake.

GLEN ARBOR, 60 m. (100 pop.), was founded in 1848 by John LeRue, the first settler in Leelanau County. LeRue, who came north from Chicago for his health, lived by fishing and trade with the Indians. Sawmill and cordwood-cutting developments began in the late 1850's, but the population of Glen Arbor dwindled after the lumbering peak had been passed.

Right (*straight ahead*) from Glen Arbor on County 109 to GLEN HAVEN, 2.5 m. (75 pop.), with a similar lumbering history. The hotel, SLEEPING BEAR HOUSE, was built in 1857. The docks here are used by South Manitou Island boats (*passage can be arranged*).

SOUTH MANITOU ISLAND, 7 m. by water from Glen Haven (50 pop.), is often used as a base for the annual maneuvers of the Great Lakes Naval Reserve Fleet, because of its excellent harbor with deep water close to shore. Its isolation from the mainland and freedom from blowing pollen make the island an excellent location for experiments in growing pure strains of crop seed. The LIGHTHOUSE was established in 1839; there is also a fully manned COAST GUARD STATION.

Right 0.3 m. along Sleeping Bear Bay to the D. H. DAY STATE PARK (*camping, store*). Its 32 acres, supporting a thick growth of pine and juniper, were deeded to the State in 1920 by the man for whom it is named. Creeping sand dunes fringe its 700-foot beach.

South of Glen Arbor, State 22 follows the shore of GLEN LAKE (L), crossing at 63 m. the narrow part of the arm extending northwest toward Sleeping Bear sand dune. The lake is surrounded by hills offering wide views of Sleeping Bear Point, Lake Michigan, and the Manitou Islands. The beauty of its setting makes Glen Lake a favorite subject of travel-magazine photographers.

At 66 m. is a junction with State 109.

Right on State 109 to SLEEPING BEAR SAND DUNE (L), 3 m., which rises as much as 600 feet above the lake. The sands, somewhat like a sleeping bear in outline, are being moved by the west winds toward Glen Lake, at a rate of six feet a year, burying trees and grass on near-by farms. An estimated 200 acres of sand at Sleeping Bear Point, chiseled by the wind and undermined by the lake currents, vanished into Lake Michigan in 1915. So fine is the sand that some parts of the dune are suitable for summer sand-dune skiing. Prevailing westerly winds make it an ideal place for glider take-offs.

At EMPIRE, 68 *m.* (710 alt., 302 pop.), on the Lake Michigan shore, a burned sawmill and several abandoned buildings are evidence of former lumbering activity. At one time, the community possessed the largest sawmill in Leelanau County, but today cherry-production is its main source of livelihood. The village is headquarters for glider fans who take off from Sleeping Bear Dune. A local resident reports air conditions to glider clubs.

At 78 *m.* is a junction with a graveled road.

Right on this road to BENZIE STATE PARK (*camping, store*), 1 *m.*, a 180-acre tract with a quarter-mile sand beach on Lake Michigan and almost as much on the Platte River. Largely in its natural state, the park is popular with campers because of its easy access to some of Michigan's most beautiful lakes, including Crystal, Glen, and Platte.

CRYSTALLIA, 87.5 *m.*, is built on a narrow strip of land, between Crystal Lake and Lake Michigan, known as the Crystal Lake Bar. Two miles long and three-quarters of a mile wide, the bar is composed of fixed and moving dunes, with a thin strip of lake sediment along the shores of Crystal Lake, which nurtures hardwood and swamp growths. The resort, owned by a corporation, was platted in 1895.

The CONGREGATIONAL ASSEMBLY GROUNDS, 87.5 *m.*, organized in 1903 on 125 acres between Lake Michigan and Crystal Lake, is equipped with a golf course, an auditorium, a post office, and a dining hall.

FRANKFORT, 91 *m.* (583 alt., 1,468 pop.), is set in an amphitheater of hills overlooking Betsie Lake and the Betsie River. 'Betsie' is believed to be derived from the term *bec scie* (Fr., sawbill), which may have been used by French explorers to designate this region. Along the harbor front are the docks of commercial fishing rigs, with nets wound on drying reels. In the center of the city, north of Main Street, is a CROOKED TREE, its trunk bent at right angles, that once marked an Indian trail.

ELBERTA, 92.5 *m.* (583 alt., 609 pop.), lies at the bottom of three hills, the highest rising 240 feet. The village, after losing its charcoal-iron industry, stagnated for many years until the establishment of car-ferry service to Manitowoc, Wisconsin, and to Menominee and Manistique in Upper Michigan. Five ships enter or depart from this port daily throughout the year. (*For automobile schedule and rates, see Manistique, Tour 16b, and Menominee, Tour 19.*)

ARCADIA, 104 *m.* (375 pop.), became a village in 1880. It was first settled by an immigrant German, who made a fortune out of the hardwood forests near Lake Michigan. The story of Arcadia's rise and decline is similar to that of other settlements in the region. Each summer, Arcadia is host to the Missouri Synod of the Lutheran Church, which meets here for restorative spiritual and physical exercises.

ONEKAMA (Ind., place of contentment), 114 *m.* (755 alt., 325 pop.), is the center of a large cucumber-raising district and a supply station for many resorts in Manistee County. The Government has made a harbor of Portage Lake by dredging a channel to Lake Mich-

igan. Numerous artesian wells and springs insure a supply of good water.

State 22 ends, 121 *m.*, at a junction with US 31 (*see Tour 15b*), 6 miles northwest of Manistee.

Tour 16

Sault Ste. Marie—St. Ignace—Manistique—Gladstone—Iron Mountain—Ironwood—(Hurley, Wis.); US 2.

Sault Ste. Marie to Wisconsin Line, 397 *m.*

Roadbed hard-surfaced except for 80 miles; two lanes, closed only during severe winter storms

Minneapolis, St. Paul and Sault Ste. Marie Ry parallels route between Sault Ste. Marie and Rudyard, and between Rexton and Gladstone; Duluth, South Shore and Atlantic Ry between Sault Ste. Marie and St. Ignace; Chicago and Northwestern between Gladstone and Ironwood

Accommodations limited to cities, except summer tourist camps and cabins, which are numerous.

US 2, a speedway between Sault Ste. Marie and St. Ignace, connects the Canadian Province of Ontario with the Lower Peninsula of Michigan. The highway follows a direct course through farm lands, tamarack and cedar swamps, and forests of maple, pine, spruce, and balsam.

Section a. SAULT STE. MARIE to ST. IGNACE; 53 m. US 2.

SAULT STE. MARIE, 0 *m.* (607 alt., 13,755 pop.) (*see Sault Ste. Marie*).

Sault Ste. Marie is at a junction with State 5 (*see Tour 17*) and State 28 (*see Tour 18*), with which US 2 is united for 6 miles south of the city.

KINROSS, 19 *m.* (55 pop.), spreading along both sides of the highway, maintains itself by growing hay and small grains and raising vegetables to be marketed in the 'Soo.'

RUDYARD, 24 *m.* (450 pop.), a comparatively young village, was chopped out of dense forest and bailed out of swamp. Clouds of mosquitoes tormented early farmers and the men who cut the Mackinaw Road through here in 1872. Because the pests made sleep impossible, farmers traveled to the Soo at night, arriving in the faint morning light at the store on Water Street, with 100 pounds of butter or 1,000 eggs to exchange for plows and calico and 'candy for the kids.' During

winter, mail carriers traveling on snowshoes or by dog-team stopped here overnight, bringing news of the world to snow-bound residents. The school teacher, boarding week by week with parents of the half-dozen school children, supplemented a meager salary by selling 'Japanese oil' and patent medicines.

Rudyard, as well as Kipling (*see section b*), was named for the English poet and author. In acknowledgment of the honor, Kipling wrote, on the back of a photograph, the poem quoted below, and sent it to Fred D. Underwood, who had named the stations in 1896, while general manager of the Baltimore and Ohio Railroad.

RUDYARD AND KIPLING

'Wise is the child who knows his sire,'
The ancient proverb ran,
But wiser far the man who knows
How, where and when his offspring grows,
For who the mischief would suppose
I've sons in Michigan?

Yet I am saved from midnight ills,
That warp the soul of man,
They do not make me walk the floor,
Nor hammer at the doctor's door;
They deal in wheat and iron ore,
My sons in Michigan.

O, tourist in the Pullman car
(By Cook's or Raymond's plan),
Forgive a parent's partial view;
But maybe you have children too—
So let me introduce to you
My sons in Michigan.

Rudyard is at a junction with State 48, which leads westward through TROUT LAKE, 26 *m.* (350 pop.), to a junction with US 2, 35 *m.* (*see below*).

South of Rudyard the route roughly parallels the Pine River and, at 27.5 *m.*, enters the MARQUETTE NATIONAL FOREST, which it traverses the rest of the way to St. Ignace.

At 35 *m.* is a junction with State 4 (*see Tour 17*).

ROGERS MONUMENT (R), 43 *m.*, was erected in honor of Frank Rogers, former highway commissioner; each county in the Upper Peninsula is represented by a stone in the monument.

At 48 *m.* is a junction with a side road.

Left on this road to RABBIT'S BACK PEAK, 0.5 *m.*, the summit of which offers a panorama of many miles of lake-studded forest. Across this broad landscape the Pine River, flowing toward St. Martin Bay, stretches its sparkling length. Beyond the blue bay waters rise the St. Martin Islands.

The privately owned FORT ALGONQUIN MUSEUM (*adm.* 10¢), 49 *m.* (R), is a reproduction of an Indian fort and trading post with relics of early American and Indian life. These include dugout canoes, head-

dressess, and a collection of household utensils and personal possessions of an Indian family.

CASTLE ROCK (R), 50 m., was once a lookout of the Ojibway. An Indian legend names this spot as the meeting place of a beautiful Indian maid and her white lover. Former suitors, jealous of the new lover, hurled him to his death over the cliff. As in almost every such legend, the girl, finding her days without joy, leaped from the same high peak. There is a stairway (*adm.* 10¢) leading to the top of the rock.

ST. IGNACE, 53 m. (600 alt., 2,109 pop.) (*ferry between St. Ignace and Mackinaw City (see Tour 11a), in Lower Peninsula; winter, every three hours; spring and fall, every hour and a half; summer, every hour; rates, car and driver, \$1 to \$1.50; passengers, 25¢; trailers, \$1 up*) (*see St. Ignace*).

Section b. ST. IGNACE to IRON MOUNTAIN; 205 m. US 2.

Between St. Ignace and Iron Mountain lie thriving cities, fishing villages, and abandoned lumbering communities along the Lake Michigan shore. West of Escanaba are the wooded hills of the iron country. Although the coves and harbors were explored by the French *voyageurs* in the early seventeenth century, no cities west of St. Ignace are more than 100 years old. In little more than a half century, great industries have developed and declined, and dozens of communities have been abandoned.

The story of the fisheries along these shores is typical of the record of improvident zeal that ravished the tremendous resources of the old Northwest. Early in the nineteenth century, the upper waters of Lake Michigan were exploited for their great yield of food fish, principally whitefish and Mackinaw trout. Year after year the number of rigs and the efficiency of the gear increased. Fish too small to command good prices were killed in the lifting, species considered undesirable—even the sturgeon, now considered a delicacy—were discarded, and the marketable catch, thousands of tons annually, was shipped to metropolitan centers. No laws governed the industry until 1887, when the depletion of supplies was recognized. Since that time, regulations have become more and more restrictive, but the schools of fish continue to decrease. In recent years many conferences among States bordering the Great Lakes have been held, in the hope that uniform laws may be passed to govern the industry and assure its future. Conservation authorities believe that progress is now being made.

West of ST. IGNACE, 0 m., US 2 is lost in woodlands for a short distance, then reaches the Lake Michigan shore. Many points still bear the descriptive names given to them by the *voyageurs*: Pointe La Barbe (Fr., the beard), where *voyageurs* stopped to shave and don their best clothes before going on to Mackinac; Gros Cap (Fr., big cape), a blunt-nosed out-thrust of land; Pointe Aux Chênes (Fr., point of the oak trees); and Seul Choix Pointe (Fr., only choice), so

designated, perhaps, because it offered the only available shelter during sudden storms.

On a shelf of land between Lake Michigan and the rocky bluff the highway follows is GROS CAP (L), 7 *m.* (125 pop.), a small fishing village founded in 1855 by a Mormon named Cheeseman, a refugee from Beaver Island (*see Beaver Archipelago*). The settlement has no store or gas station, and many of the chinked log cabins stand as originally built. Visible two miles off Gros Cap is St. Helena Island, at one time a refueling station for wood-burning steamers plying the Straits.

At 18 *m.* is a junction with a graveled road.

Right on this road to a junction with another graveled road, 1.5 *m.*; R on this road to the BREVORT LAKE CAMP AND PICNIC GROUNDS (*pike, bass, and muskellunge*), one of many sites in the Upper Peninsula improved by CCC workers.

BREVORT, 22 *m.* (103 pop.), a fishing village settled in 1884, once had ten fishing tugs operating out of the harbor. It was known in the 1880's as 'The Warehouse' because of a storage building used by a steamship line between St. Ignace and Manistique.

On the HIGH ROLLWAYS (L), 24 *m.*, lumber companies in the 1880's and 1890's piled a winter's cut of logs, awaiting the opening of navigation on Lake Michigan. In the spring, lumberjacks broke the rollways, and the logs thundered down the 100-foot sand hill into the lake, to be formed into rafts and towed away.

The highway dips into the sharp valley of CUT RIVER, 27 *m.*, site of a small summer resort of the same name.

At 29 *m.* is a junction with a graveled road.

Left (*straight ahead*) on this road is EPOUFETTE (Fr., place of rest), 1 *m.* (131 pop.), named in the belief that Father Marquette used the harbor as the first stop on his trip down Lake Michigan from St. Ignace. The village was established by a French fisherman in 1859 but was designated as a post office only after lumbering operations had started in 1881. Backed by high hills, the cabins of the village stretch two miles along the harbor. Fishing remains the chief activity.

At 37 *m.* is a junction with State 48.

Right on State 48 is TROUT LAKE, 9 *m.* (350 pop.), settled in 1881 at a junction of the Minneapolis, St. Paul & Sault Ste. Marie Railway and the Duluth, South Shore & Atlantic Railway. Surrounded by forests, Trout Lake became a trading center for lumber camps; with four saloons to entertain the lumberjacks, it soon attained a reputation second only to that of Seney (*see Tour 18a*). Although some pulpwood is cut near Trout Lake, the villagers depend for subsistence on employment in the local roundhouse and on the tourist trade. Near the village are several small lakes, and the surrounding country is one of the best deer-hunting regions in the eastern Upper Peninsula. On Twin Lake and Frenchman Lake, south of Trout Lake, is BRCHWOOD, a summer camp. Eastward, State 48 leads to RUDYARD, 35 *m.* (450 pop.), at a junction with US 2 (*see above*).

REXTON, 40 *m.* (200 pop.), established as a hardwood-logging center in 1880, passed its lumbering stage when the sawmill was discontinued in 1912.

GARNET, 43 *m.* (80 pop.), a sawmill village of 500 population between 1897 and 1917, today operates a small shingle mill.

At 50.5 *m.* is a junction with a graveled road.

Left on this road is NAUBINWAY, 4 *m.* (183 pop.), a commercial fishing village and summer resort on a sheltered rocky bay. Settled in 1880 by French fishermen, Naubinway soon attracted a group of lumber operators, who established a portable sawmill. Lumbering and fishing activities expanded rapidly in the 1880's, until the village had a population of 1,500, it had 34 fishing tugs, a sawmill employing nearly 600 men, and a pier accommodating 10 lumber barges. The mills closed in 1896, and the population of Naubinway dwindled to six families in 1898. Second-growth timber attracted new operators in 1906, and a sawmill erected in that year continued operations for a decade. The fishing fleet has been reduced to eight tugs.

The office and information booth of the HIAWATHA SPORTSMAN'S CLUB (*open all year; golf, riding, dining room*), 52.5 *m.* (L), is headquarters of a club established in 1931 on 35,000 acres of cut-over land. The club property includes 6 miles of Lake Michigan frontage and extends nearly 11 miles inland. Within its boundaries are eight lakes, largest of which is Lake Millecoquin (Fr., lake of a thousand rascals). The club has a membership of 1,500—the limit is 4,000—with fees that range from \$250 to \$700. Members either rent cottages built by the club or construct their own.

ENGADINE, 57 *m.* (150 pop.), built around a railway station, is a supply point for a resort area.

At 63 *m.* is a junction with a graveled road.

Left on this road to GOULD CITY, 0.5 *m.* (200 pop.), where hemlock and hardwood timber is still cut. SCOTT'S POINT, 10 *m.*, is a deserted fishing village. Along the smooth sweep of sandy beach are forlorn reminders of another day—a dilapidated icehouse, two stripped fishing tugs hauled up on the ways, broken net reels, and spiles that were once the foundations of net houses and docks.

At 74 *m.* is a junction with State 77.

Right on State 77 to BLANEY PARK (*open all year; riding, hiking, golf, tennis*), 1 *m.* (49 pop.). The 22,000-acre tract was purchased in 1886 by the Wisconsin Land and Lumber Company and logged under contract. In 1926, when the property had been almost completely logged off, the owners made a resort community of the tract; groups of cottages were built, and old logging roads became riding and hiking trails. Some sections are marked for bird sanctuaries and game preserves; others are open to guests for hunting and fishing. The yearly cutting of the remaining timber gives guests an opportunity to observe motorized lumbering operations. Ahead on State 77 is SENEY, 17 *m.* (150 pop.), at a junction with State 28 (*see Tour 18a*).

At 81 *m.* is a junction with State 99.

Left on State 99 to PORT INLAND, 8.5 *m.*, location of the Inland Lime and Stone Company. This enterprise, completed in 1930, quarries 3,000,000 tons of limestone every year between April and December, the season of navigation. Seventy-five per cent of the stone is shipped by water, loaded into freighters by

an elaborate system of conveyor belts that automatically weighs each cargo. The stone is used primarily in the steel centers along the lower lakes. Laborers live in near-by communities and travel to work by chartered bus.

GULLIVER, 82 *m.* (50 pop.), is also known as Whitedale—Upper Michigan villages often have several names.

MANISTIQUE (from *Onamanitigong*; Ind., vermillion), 96 *m.* (613 alt., 5,198 pop.), seat of Schoolcraft County, is an important manufacturing and resort city at the mouth of the Manistique River. The industrial life of Manistique dates from a lumbering development of 1860, from which grew one of the Upper Peninsula's largest lumber centers—a city with mills and docks that extended several miles upstream. At the peak of production, the mills had an output of 90,000,000 board feet of pine annually, much of which went to build Chicago and other expanding Midwest cities. Before 1900, the supply of pine was exhausted and the mills closed down. New plants—a tannery, a chemical factory, lime kilns, and iron furnaces—replaced the vanished lumber industry, and were eventually succeeded by hardwood manufacture, shipping, papermaking, and commercial fishing, the principal occupations of today.

The Manistique River is fed by dozens of streams that rise in the red-rock country near the southern shores of Lake Superior. US 2 crosses the river on a HIGHWAY BRIDGE that has a roadbed several feet lower than the surface of the water. In 1916, when the Manistique Pulp and Paper Company was organized, engineers realized that a dam at the mouth of the river, large enough to supply the needs of the mill, would flood a large section of the city; if the shallow river banks were diked to hold the water, bridging the river would be expensive. The problem was solved by constructing a huge concrete tank lengthwise in the river bed; the sides of the tank provide artificial banks, higher than the natural ones. Concrete bulkheads, formed by the side-spans of the bridge, allow the mill to maintain the water level several feet above the roadbed.

Ferry service for trains and passengers was established between Manistique and Green Bay, Wisconsin, in 1877, and later with other lake ports in Lower Michigan. After several routes had been tried and discontinued, the Ann Arbor Railroad established a direct route between Manistique and Frankfort (*see Elberta, Tour 15a*), in the Lower Peninsula, with docks at the foot of Chippewa Avenue (State 219) in the western section of the city. This service is now one of the three railway car-ferry routes connecting the Lower and Upper Peninsulas (*lv. E.S.T. 1 A.M. weekdays, 11:30 A.M. Sun.; passengers \$2.75, berth \$1.50 extra, stateroom \$3 extra; meals 50¢ on boat; autos 122-inch wheelbase, \$4.50; exceeding 122-inch wheelbase, \$6*).

Right from Manistique on State 94 to the HIAWATHA GRANGE HALL (L), 13 *m.*, a dilapidated building that marks the SITE OF HIAWATHA (R), a co-operative colony established in 1893 by Thomas Mills, American socialist. On a 240-acre farm, the gift of the Populist leader, Abe Byers, the Hiawatha Village Association erected 20 structures, housing 225 persons, who pooled their re-

sources. When two disgruntled members won a suit for the return of their property, the colony began slowly to disintegrate. Other dissatisfied members also brought suit, and in 1896 the colony was abandoned.

THOMPSON, 102 *m.* (244 pop.), settled as a fishing village, became a sawmill center, with the growth of Manistique lumbering operations, and once rivaled that city in population.

Right from Thompson on State 149 to BIG SPRING, 12 *m.*, known by its Indian name of Kitchitikiipi (Ind., cold big water). Kitchitikiipi, brimming with crystal-clear water, is 300 feet long by 175 feet wide and is fed by more than 20 bubbling springs in its sandy bottom. Legends state that in earlier days the springs occasionally spouted columns of water far into the air. The deepest point in the spring is 40 feet; the sides, covered with moss and other plant life, slope precipitously downward. A raft with two glass-bottomed openings is maintained for public use. So clear is the water that a penny dropped into the spring may be observed all the way in its zigzag course to the sandy floor.

On the bed of Kitchitikiipi is a pattern resembling the outline of a female figure, a possible source of the legend that an Indian maid, eluding the unwelcome attentions of a suitor during the absence of her betrothed, leaped into the spring and was changed by its magic properties into a white deer. To some tribes believing this legend, the killing of a white deer was taboo. It was believed for a long time that no swimmer could remain alive in Big Spring, a superstition that gained credence because no frogs or other animal life inhabit it. In this land of intensely cold winters, the spring never freezes over. The mineral content—iron carbonate, calcium chloride, magnesium sulphate, and sodium—gives the water a noticeable, but not unpleasant taste. The clean gray-white sand that forms the bed of the spring turns black upon exposure to air. When moistened, the sand resumes its natural color.

At 113 *m.* is a junction with County 483.

Left on this road to the GARDEN PENINSULA, an irregular neck of land between Lake Michigan and Big Bay de Noc. When lumbering and fishing attracted white men to the peninsula in 1850, a band of Menominee lived here, cultivating gardens so fertile that the whole peninsula was named 'Garden.' Not all sections of the peninsula are tillable, along the western shore the limestone bedrock appears near the surface, and the fields and hillsides are suitable only for grazing.

GARDEN, 9 *m.* (600 alt., 371 pop.), the only incorporated village in Delta County, was the first white settlement on the Garden Peninsula.

FAYETTE, 18 *m.* (50 pop.), its weathered buildings grouped around a small landlocked harbor, exemplifies in its history the fortunes of the iron-mining industry in the Upper Peninsula. The deep natural harbor, as well as extensive limestone deposits and an abundance of hardwood—both necessary in the early processing of iron ore—marked Fayette as a perfect site for a blast furnace. Construction of the furnace was started in 1867 by the Jackson Iron Company of Negaunee (see *Tour 19*), owners of the discovery lode in the Marquette Range. Ore was brought in by boat; the population reached 1,000, and Fayette prospered. But the hardwood timber was exhausted in the late 1880's, and within a few years fires were extinguished and machinery was dismantled. In 1896, the Cleveland-Cliffs Iron Company acquired the Fayette interests, and in 1916 the abandoned village—once valued at \$300,000—was sold for a few thousand dollars.

The harbor is shadowed on the northeast by an overhanging limestone cliff, 90 feet high, and ringed with vertical spiles that once supported extensive docks for the ore boats. Sections of the docks have been maintained for the use of fishing tugs, and the dozen staunchly built houses remaining in the village are used as summer homes by fishermen and a few former residents. Almost hidden

from the road by an overgrowth of bushes and trees are the stripped buildings of the blast furnace, standing like bleached skeletons along the shore.

FAIRPORT, 25 *m.* (100 pop.), was settled in 1880 by fishermen from St. Martin Island. In the last decades of the nineteenth century, Fairport was one of the busiest fishing centers in the Garden Peninsula. The industry included a freezer and a sturgeon pen, where the large fish, often six feet in length, could be confined until the market was favorable. At times the sturgeon were frozen and piled on the shore like cordwood awaiting shipment. Steam and gasoline tugs set dozens of nets in the bay, and two sailing vessels carried the cargoes of salted fish to Chicago markets. Unrestricted operations lowered the catch, but Fairport is still an active fishing port with a dozen tugs in operation.

US 2 skirts the head of BIG BAY DE NOC to ISABELLA, 117.5 *m.* (227 pop.), settled in 1868 to supply charcoal to the furnace at Fayette, today a station on the Soo Line and center of a farming community.

Left from Isabella on County 495 to a junction with a graveled road, 1.2 *m.*; L. on this road to NAHMA (pron. nay-ma; Ind., sturgeon), 5.5 *m.* (700 pop.), a sawmill village on Big Bay de Noc at the mouth of the Sturgeon River. Burned and rebuilt twice, the present mill is operated by electricity and has a potential daily production of 40,000 board feet of hardwood and 60,000 feet of softwood.

West of Nahma, directly across the Sturgeon River, is the NAHMA INDIAN SETTLEMENT, 6 *m.* (90 pop.), where remnants of the Chippewa, Ottawa, and Potawatomi tribes live on land owned by the Bay de Nocquette Company, paying rent of \$1 a year so that they may not claim squatters' rights. A few of the Indians make baskets, birch-bark souvenirs, and buckskin accessories, but the majority are employed in the mill at Nahma and in the woods.

RAPID RIVER, 136.5 *m.* (200 pop.), the scene of logging operations since 1847, once had a dozen mills. One small sawmill, specializing in window and door frames and cabinet work, remains in operation. There are several camping parks and tourist developments within a seven-mile radius of the village.

MASONVILLE, 139.5 *m.* (100 pop.), is the site of the first sawmill in Delta County, built in 1847 by Darius Clark. Prior to 1863 it was the seat of Delta County. The last factory in the village, a woodenware plant, burned in 1932.

KIPLING, 142 *m.* (40 pop.), like Rudyard, was named for the English author. In the eastern half of the Peninsula, a rash of British nomenclature broke out near the end of the nineteenth century, characterized by such names as Gladstone and Brampton. Some explanation for the British influence may be found in the fact that, at the time these names were appearing, railroad promoters were selling issues of their securities to investors in the British Isles. The site of a charcoal iron furnace and chemical plant, Kipling was important in the industrial and shipping activities of the Upper Peninsula until the timber was exhausted. The kilns, rounded beehives of stone, and the idle docks stand as visible evidence of Kipling's brief prosperity.

GLADSTONE, 143.5 *m.* (612 alt., 5,170 pop.), a small industrial city with a deep-water harbor on Lake Michigan, was founded in 1887 to furnish the Minneapolis, St. Paul & Sault Ste. Marie Railway

(Soo Line) with an eastern outlet for grain shipments. Opposing the extension of the road were Eastern financiers interested in the Chicago & Northwestern Railway. These men blocked the source of funds, and for a time it seemed the rails might never reach their Lake Michigan terminal. Soo Line officials, however, sought the aid of the Canadian Pacific, and, although they lost controlling interest in the line, the road was eventually extended through Gladstone to Sault Ste. Marie and connected with Canada by an international bridge.

In 1887, Gladstone was an agglomeration of tents and shacks, but two years later, when it was incorporated as a city, the population was 1,580. A cooperage company, begun in 1892, has expanded into the manufacture of hardwood flooring, veneer, and plywood and is one of the city's two main industrial plants. The MARBLE ARMS PLANT (*open 8-5 Mon.-Fri.*), Superior St. between 11th and 12th Sts., manufactures axes, hunting knives, waterproof match boxes, compasses, gun sights, firearms parts, and sporting goods. VAN CLEVE MUNICIPAL PARK (*bathing, camping, picnicking*), in the southwest section of the city, is the setting of an annual Winter Carnival, held in February.

Gladstone is at a junction with State 35 (*see Tour 19a*), with which US 2 is united for 8.5 miles.

PIONEER TRAILS COUNTY PARK (*camping*), 148.5 m. (L), embraces 100 acres of pine forest on Little Bay de Noc and the Escanaba River.

At 152 m. is a junction with US 2A.

Left on US 2A to ESCANABA (from *eshkonabang*; Ind., land of the red buck), 1 m. (612 alt., 14,524 pop.), seat of Delta County and one of the two important iron-ore shipping ports in the Upper Peninsula. Pine timber attracted white men to this region as early as 1830, but development of iron-ore shipping did not take place until 1863, when railroad men, seeking a deep-water shipping port on Lake Michigan, constructed the first dock. In 1864, the first shipping season, 31,072 tons of iron ore passed through the harbor; by 1888, shipments had increased to 1,107,129 tons. Commercial fishermen, attracted by port facilities, marketed more than 2,000,000 pounds in 1881.

Paper, iron, chemicals, and hardwood products are the city's leading articles of manufacture. On the waterfront, piers rise 70 feet above the water and extend nearly a half mile into the bay. Each year about 4,000,000 tons of iron ore, brought by rail from the Marquette, Menominee, and Gogebic ranges, are shipped to the steel centers of the lower lake country. Ninety-five per cent of the world's supply of bird's-eye maple grows within a 200-mile radius of the city. In 1936, Escanaba furnished 100,000 square feet of bird's-eye maple for the Cunard line's S.S. *Queen Mary*.

Water and open country have made Escanaba a recreational as well as an industrial city. The season is opened, usually the first week in April, by the annual Smelt Fishing Jamboree, three days of pageantry coinciding with the smelt runs in the Escanaba, Ford, and other near-by rivers. Smelt fishermen, clad in hip boots and carrying dipnets, march through the streets in an opening torchlight parade. The river banks, during the dipping, are lighted by torches and bonfires.

Midsummer water sports and races are climaxed by the Venetian Night Program, usually in August, sponsored by the Escanaba Yacht Club. The program includes a water pageant, a musical program, and a display of fireworks on the bay. The season closes the third week in August with the annual Upper Peninsula State Fair, at the Fairgrounds on US 2 (Washington Ave. at 12th Ave. N.).

The week of entertainment and exhibitions ends on Escanaba Day, which includes special races, shows, fireworks, and a National log-birling contest. The yearly sports program is completed with the annual Winter Carnival, a week end of winter sports in late January or early February, held at Ludington Park. In the vicinity of Escanaba are lakeside parks, well-equipped playgrounds, bath-houses, and boating places. LUDINGTON PARK (*tennis, bathing*), 1st Ave. at Lake Shore Drive, is a municipally owned tract, shaded by large red oaks, with a mile frontage on Little Bay de Noc. Also on the bay shore is the ESCANABA TOURIST CAMP, Lake Shore Drive at 18th Ave. BOY SCOUT PARK, 18th Ave., in the southwestern section of the city, is a 60-acre woodland where Boy Scouts from troops throughout the State assemble for annual outings.

The main route, US 2, proceeds through the iron country west of Escanaba.

BARK RIVER, 164 *m.* (300 pop.), in a dairying region, was established in 1871 as a station on the Chicago & Northwestern Railway. Engineers named the site for the quantities of bark floating in the river when they made their survey.

HARRIS, 166 *m.* (45 pop.), was named for the first permanent settler, M. B. Harris, who, during a smallpox epidemic, earned the gratitude and admiration of a neighboring band of Potawatomi. The quarantined Indians were saved from starvation by food and milk that Harris carried to a designated point near the settlement.

Left from Harris on a graveled road to the HANNAHVILLE INDIAN SETTLEMENT, part of the Wilson-Harris group, scattered along the five-mile stretch of road south of US 2. Farming is the chief pursuit of the 135 Indians who live in the settlement, although native handicrafts are still practiced for the tourist trade.

SPALDING, 175 *m.* (200 pop.), and POWERS (580 alt., 360 pop.), are twin villages on the Chicago & Northwestern Railway. In Powers is the PINECREST SANATORIUM, a tri-county tubercular hospital organized in 1919.

Spalding is at a junction with US 41, which leads south 40 miles to Menominee (*see Tour 19b*).

At 180 *m.* is a junction with a concrete road.

Left on this road to HERMANSVILLE, 0.5 *m.* (1,615 pop.), location of the Wisconsin Land and Lumber Company hardwood-flooring mill.

Left (south) from Hermansville on County 388 to a junction with a graveled road, 2 *m.*; L. to a junction with a similar road, 3 *m.*; L. here to the HIAWATHA SILVER FOX FARM, 3.5 *m.*, a commercial fur enterprise covering 2,000 acres. Normally about 900 selected and pedigreed breeders are kept here, but, during the fall, 10,000 animals are shipped in from Wisconsin for priming. The commercial pack, fed on a diet of mixed meats and cod-liver oil, is allowed to run at large in the wild woodlands of the farm. At pelting time, the foxes are caught in runways, carefully chloroformed, and trucked away to the pelting station.

A MENOMINEE COUNTY PARK (L), 185.5 *m.*, in a grove of virgin hardwoods, is equipped with camp sites, tables, and running water.

LORETTO, 192.5 *m.* (500 pop.), on the rim of the Menominee Iron Range, was once the scene of active mining operations.

Left from Loretto on a county road to the HAMILTON LAKES (R), 2 m., a chain of three spring-fed lakes, developed for recreational purposes. Camping sites, stoves, tables, and a bathing beach have been provided.

VULCAN, 195.5 m. (1,150 pop.), saw the beginning of productive mining in 1874, when the area was found to be rich in blue hematite. In 1877, a railroad, bringing in additional capital and up-to-date equipment, made Vulcan an important mining center. Of the dozen shafts once in operation only the CENTRAL VULCAN MINE (L) was active in 1939. There are fishing and bathing at Hanbury Lake, within the village.

NORWAY, 197.5 m. (950 alt., 4,016 pop.), grew up on the Vulcan hematite vein at its richest point. For several decades following the first test pitting in 1877, the location was the Golconda of the Menominee Range, producing millions of tons of iron ore. So close together were the mines, so active their underground workings, that the village caved in and stores and houses had to be moved. At present all the mines are inactive, several flooded.

Left from Norway on US 8 (Brown St.) to MARION PARK (*camping*), 1 m.

At 2 m. is a junction with a graveled road, R. to the INDIAN HEAD FISH HATCHERY (*open 7-5 daily; 10¢ fishing fee, \$1 pound*), 2.5 m., at the end of a lane leading R. from the side road. In tanks on a spring-fed stream, rainbow, brown, and brook trout may be hooked by visitors.

Left (*straight ahead*) from the hatchery through a gate at the end of an earth road, 3 m.; R. here on a footpath 200 yards to the NORWAY PIERS, a rock formation causing a series of rapids in the Menominee River. Perpendicular to the ground, the weathered outcroppings of stone stand like spiles in the river; during low water, they can be used as stepping stones to the middle of the channel.

QUINNESEC (Ind., smoking river), 201.5 m. (800 pop.), the oldest village on the Menominee Range, began mining operations as early as 1873, hauling the ore on sleighs and wagons to Menominee.

IRON MOUNTAIN, 205 m. (1,150 alt., 11,652 pop.), is a manufacturing city and the distribution point for the Menominee Range district. The city received its name from its location near a bluff heavily stratified with iron ore. Here were concentrated the richest deposits of Menominee hematite in the district; though mining began after other points were already producing, this area took the lead in a single decade. From 1878, when ore was discovered, to 1889, when mergers began, a score of mines were in operation in this vicinity, among them the Hewitt, Ludington, and Chapin mines and a mine owned and operated by Mark Hanna.

Late in 1889, Ferdinand Schlesinger, a Milwaukee capitalist, obtained a monopoly over the district and systematized production. The mines, despite changing ownership, produced continuously until the 1930's, when the folds were exhausted. Tremendous earth scars, such as cave-ins and abandoned mine pits, are reminders of the once thriving industry.

The old CHAPIN MINE PUMP, on a hill in the western section of the city, has been aluminum-painted and preserved as a tourist attraction.

It is the last example of a Cornish pumping plant in the Upper Peninsula. Standing 54 feet in height, it is fitted with a low-pressure cylinder, 100 inches in diameter, and a high-pressure cylinder, with a diameter of 50 inches. The flywheel weighs 160 tons. The pump had a capacity of 3,000 gallons a minute and required a crew of 56 men.

1. Right from Iron Mountain on Stephenson Street to the junction at 0.6 m.; L. here to the PEWABIC MINE CAVE-IN, 1.2 m., caused when the rock shell above the mining shafts collapsed, leaving a chasm several hundred feet deep and a quarter of a mile long. Paths along the brink of the pit allow views of its rocky depths.

2. Left from Iron Mountain on Roosevelt Mountain Drive to the ROOSEVELT MOUNTAIN SKI SLIDE (1,600 alt.), 2.2 m., which has an elevation of 460 feet. The panorama to be seen from the top of the hill, formerly known as Pine Mountain, covers 30 miles of country and includes seven lakes and eight communities. Each winter, usually in January, this hill is the scene of Iron Mountain's winter sports activities.

3. Left from Iron Mountain on State 95 to KINGSFORD, 2 m. (1,150 alt., 5,526 pop.), an Iron Mountain suburb that developed around a plant of the Ford Motor Company. Ford holdings include a sawmill, the largest single battery of drying kilns in the world, a chemical plant, three plants making wood parts for Ford cars, and a hydroelectric plant on the Menominee River.

4. Right from Iron Mountain on State 95 to REPUBLIC, 47 m. (1,090 pop.), and a junction with State 28 (US 41), 55 m. (*see Tour 18b*).

Section c. IRON MOUNTAIN to WISCONSIN LINE;
139 m. US 2.

West of IRON MOUNTAIN, 0 m., are numerous formations of old rock and great ore beds. The gaunt terrain in the iron ranges is not suited to agriculture, but, in the pine lands between the Menominee and Gogebic ranges, farming is important.

At 4 m. is a junction with a side road.

Left on this road, which underpasses the main highway after a hair-pin turn, to TWIN FALLS PARK (L), 0.6 m., formed by three islands in the Menominee River, reached from the mainland by a suspension footbridge. Near the park entrance is the DICKINSON COUNTY PIKE HATCHERY, with an annual capacity of 63,000,000 eggs.

US 2 crosses the Menominee River, 4.5 m., and enters Wisconsin, passing through Spread Eagle, 8 m., and Florence, 15 m., before crossing the Brule River, 19 m., and re-entering Michigan.

The fortunes of CRYSTAL FALLS, 30 m. (1,344 alt., 2,295 pop.), near a cascade on the Paint River, have varied with those of the lumbering and mining industries. The largest development was the Bristol Mine, opened in 1882 in the northeast section of the city, which became one of the best producers on the Range.

Each year on July 3 Crystal Falls holds a Bass Festival on the Paint River. Beginning with a 14-mile boat trip down the river, the program includes a bass-fishing contest with cash awards, casting exhibitions, a barbecue, horse racing, a baseball game, and a dance at

the City Hall. The CRYSTAL FALLS GOLF COURSE (*greens fee, \$1*) overlooks the Paint River; surrounding lakes offer boating and bathing.

BEWABIG PARK (*camping 50¢ first night, 25¢ each additional night; bathhouse*), 34.5 m. (L), is a 40-acre tract of virgin hardwood on Fortune Lake.

At 35.5 m. is a junction with County 639.

Left on this road, which dips through veritable tunnels in the overhanging hardwoods, to PENTOGA PARK (*camping 50¢ first night, 25¢ each additional night*), 5.5 m., on the shore of CHICAUGON LAKE (from *sakascon*; Ind., lake of the big trout). On this site in 1851, a Government surveyor, Guy H. Carleton, found an Indian village stretching for more than a mile along the lake. North of the park is a well-kept Indian burial ground.

IRON RIVER, 47 m. (1,820 alt., 4,665 pop.), and STAMBAUGH (1,820 alt., 2,400 pop.), its sister city, were the last of the large mining communities on the Menominee Range to be developed. The first recorded discovery of iron ore in this district was made by Harvey Mellen, a U. S. surveyor, who described, in a report dated August 8, 1851, an 'outcrop of iron ore five feet high on the west face of Stambaugh Hill.' Prospectors from Quinnesec entered the Stambaugh area in 1878; three years later, Iron River was settled. Shipments of ore were made from the Iron River and Nanaina Mines in 1882, when the Northwestern Railway reached the city, but, because the ores were non-Bessemer in character and covered by heavy deposits of glacial drift, the mining industry was for a time outpaced by lumbering. One of the largest producers in the district is the Caspian Mine, which has shipped more than 6,000,000 tons of ore since 1903.

West of Iron River US 2 climbs steadily upward. At 49 m. the highway enters the OTTAWA NATIONAL FOREST, which, except for two small areas, entirely covers the western end of the peninsula. With 1,700,000 acres—the largest national forest in Michigan—the tract includes great stretches of uninhabited country that for scenic attraction and recreational value are unexcelled in the State.

The rugged beauty of the land in the forest area is easily seen from the highway, for between this eastern boundary and Wakefield are many long stretches of wild country unmarked except for the winding road. In the level plains surrounding Watersmeet, the land is sandy and covered with second-growth pine; west of Watersmeet, in the rugged hills of the Gogebic Range, are mixed growths of pine and hardwood that in many places make solid forest walls on either side of the highway. Indicative of the isolation of this area are the scores of porcupine killed each year by speeding cars.

The Gogebic country is dotted with more than 50 lakes, nearly all of which contain large-mouth and small-mouth bass, and there are a dozen trout streams containing rainbow and German brown trout. Lake Gogebic contains walleyed pike as well. Hunting for sharptail and ruffed grouse and deer is excellent.

At 59.5 m. is a junction with a graveled road.

Left on this road to COOKS RUN TROUT REARING STATION, 1 *m.*, on Cooks Run Creek. Along the stream are pools where trout fry from the Watersmeet Hatchery are fed throughout the summer. In the fall, the young trout, from five to seven inches long, are released in selected streams of Iron and Gogebic Counties.

The VON PLATEN-FOX COUNTY PARK (L), 60.5 *m.*, is an 89-acre heavily wooded tract presented by a lumber company in 1937.

The highway crosses the LAC VIEUX DESERT TRAIL (*see Tours 18b and 20*), 68.5 *m.*, an old Indian route of travel between Lac Vieux Desert and L'Anse Bay.

The WATERSMEET TROUT HATCHERY (R), 76 *m.*, and the ONTONAGON TROUT REARING STATION (L), 79 *m.*, are other units of Michigan's fisheries re-stocking program.

WATERSMEET, 81 *m.* (500 pop.), is at the apex of three watersheds. From the highlands at Watersmeet the drainage is to Lake Superior on the north, Lake Michigan on the east, and the Mississippi Valley on the south. During the summer and during the fall game season, Watersmeet is an important trading center.

Watersmeet is at a junction with US 45 (*see Tour 20*). For 26 miles westward the highway follows an isolated course through unsettled, heavily timbered lands.

At 108 *m.* is a junction with State 64.

Right on State 64 to GOGEBIC COUNTY PARK (*camping, boat livery*), 55 *m.* (R), in a stand of hardwood on the western shore of LAKE GOGEBIC, 12,000 acres in area, the largest inland lake in the Upper Peninsula. LAKE GOGEBIC STATE PARK (*camping*), 9 *m.* (R), is a 361-acre tract of virgin hardwood. The region is among the wildest of Michigan's recreational lands. At 18 *m.* on State 64 is the junction with State 28 (*see Tour 18b*).

West of the junction with State 64, US 2 leaves the cut-over timberlands and enters the Gogebic Iron Range, third and last of the Michigan fields to be developed. Exploitation of the Michigan ranges followed a westward course: the Marquette in the 1840's, the Menominee in the 1870's, and the Gogebic in the 1880's. Twelve mines were opened in Gogebic County between 1884 and 1887, and development continued at intervals until 1925; 32 operations had then been recorded. No mines have been opened since.

The Gogebic Range, which produces 38 per cent of the iron ore mined in Michigan, extends from a point east of Wakefield westward into Wisconsin. The ore is a soft red hematite, averaging 51 per cent natural iron, with a low phosphorous and silica content. Its chief commercial use is in the manufacture of Bessemer steel. It is also mixed with ores having a higher percentage of phosphorus and silica.

For a half century before 1910, Michigan led the United States in iron-ore production, but in that year Minnesota took first place, as the result of production in the open-pit mines of the Mesabi Range. Several open pits are still active in the Gogebic Range, huge excavations where a thin topsoil was brushed aside to expose the beds of ore.

WAKEFIELD, 124 *m.* (1,000 alt., 3,677 pop.), is on the eastern edge of the Gogebic Range. Because tax-wise city fathers included a dozen scattered mining locations within the municipal boundaries, the city spreads over five square miles. Wakefield's business district is near the south shore of Sunday Lake; the north shore of the lake is developed for camping, bathing, and picnicking. The WAKEFIELD COMMUNITY BUILDING (*open always; swimming pool, gymnasium, theater, showers*), on the southeast shore of Sunday Lake, was built in 1922 at a cost of \$400,000.

Wakefield is at a junction with State 28 (*see Tour 18b*).

The WAKEFIELD MINE (R), 124.5 *m.*, one-fourth mile wide and 375 feet deep, is one of the largest open pits on the range.

RAMSAY, 128.5 *m.* (1,500 pop.), is distinct among range villages by virtue of the white-painted, individualized houses the Eureka-Asteroid Mine Company has built for its employees. Ramsay originally was a lumbering village, with Paul Bunyan its patron saint. Most famous of the Ramsay lumbermen was 'Squeaky' Tom McDonald, champion loader and skidder of the woods, who with two yoke of oxen loaded and skidded to the rollway 1,900 pine logs in one day, a feat regarded as an all-time record for Michigan.

BESSEMER, 130.5 *m.* (1,300 alt., 4,035 pop.), seat of Gogebic County, occupies a valley in the hills, the only point in Michigan where copper and iron lodes meet. The copper formation north of the city is almost depleted, but the Bessemer iron ore, south in the Gogebic Range, is of excellent grade, with as much as 64 per cent iron content.

The Gogebic Range prospered in the 1890's, when the swift expansion of the American railroads created a wide market for Bessemer steel rails. Bessemer and adjacent camps grew into cities, wayward cities, in a single season. When factions clashed and a vigilante movement appeared, the city council met and enacted stringent ordinances. A fine of \$25 was decreed for those apprehended for 'vagrancy and street walking' or 'indecent exposure of person'; likewise for 'driving or riding a horse, running a train or bicycle faster than ten miles an hour.' Fifty dollars was the price to be paid for 'street and alley rioting' or 'improper diversions and false fire alarms.' Inconsiderates who were found guilty of 'delivering a cord of wood less than 128 cu. ft.' or 'smoking on dynamite wagon' were subject to a \$100 penalty.

Today, recreation centers about the IRONDROME AMUSEMENT HALL, a two-story structure at Lead and Mine Sts., where dances, skating tourneys, and hockey games are regularly held. The F. D. DUDA MUSEUM (*open 9-5 weekdays*), 302 Sophie St., contains a large collection of arms and other exhibits.

Right from Bessemer on County 489 to where Black River tumbles in a series of waterfalls over rocky ledges and cliffs, on its way to Lake Superior. The falls are reached by well-marked footpaths leading through the woods about 400 yards east (R).

At 10 *m.* a path (L) leads to CHIPPEWA HILL (alt., 1,700), 0.5 *m.*, one of the highest peaks in the Gogebic Range. A firetower atop the hill affords a view of the surrounding country and of Lake Superior to the north.

CONGLOMERATE FALLS, 13 m., first of the series, drops 20 feet over a rim of conglomerate rock, a formation typical of the Copper Country. GORGE FALLS, 14.4 m., at the end of a rocky canyon, has a drop of 22 feet. SANDSTONE FALLS, 15 m., named for the smooth, red sandstone formation of the river bed, is composed of a series of rapids with a total drop of 40 feet. Small RAINBOW FALLS is half a mile beyond.

BLACK RIVER PARK (*camping, picnicking*), 16 m., is a well-developed site on the south shore of Lake Superior. The river, widening as it reaches the lake, forms a harbor for fishing craft, deep-water trolling boats, and small pleasure craft. The entire park grounds have been extensively improved by CCC workers.

IRONWOOD, 137.5 m. (1,300 alt., 14,200 pop.), on the Michigan-Wisconsin border, is the mother city of the mining area that includes Bessemer, Ramsay, and Wakefield. The city is divided almost in the center by the tracks of the Soo Line and of the Northwestern Railway. On the north side of the tracks is the residential section; to the south are the business and mining districts.

Although lumbering and mining were jointly responsible for the city's growth and development, Ironwood was never so notorious as its sister city, Hurley, across the Wisconsin Line. Throughout the Middle West, wherever lumberjacks and miners congregated, Hurley was known as the hell-hole of the range. Even Seney (*see Tour 18a*), at its worst and liveliest, could not compete with the sin, suffering, and saloons that gave Hurley a reputation unrivaled from Detroit to Duluth. Ironwood expanded in comparative quiet as the chief trading center of the Gogebic Range, perhaps because its wilder elements found more congenial company for their play by stepping across the line to Hurley.

Traill blazers from the Marquette and Menominee ranges, following the westward course of new iron-ore discoveries, were the first settlers in the Ironwood district. These men were brought in by the report of J. L. Norrie, in 1884, that he had found a body of iron ore in what is now the eastern section of Ironwood. The Chicago & Northwestern Railway (at that time the Milwaukee, Lake Shore & Western Railway Company) built a branch line from Watersmeet to Ashland in 1885, to tap the new Gogebic Range. Mining was started in 1885, and the first shipment, some 15,000 tons, was carried out over the new railroad to the ore docks at Escanaba that same year.

The site of Ironwood was platted by the railroad in 1885; two years later, the rapidly growing community was incorporated as a village. Although the name is believed by some to be derived from the city's most important industries—iron and wood—the consensus of opinion is that it was named for John R. Wood, one of the first mining captains on the range. Wood was nicknamed 'Iron' for his interest in the ore deposits. In 1889, the booming village was granted a city charter, and, in 1890, five years after it was founded, Ironwood had a population of 7,745. In 1930, it was the third city in the Upper Peninsula, being slightly exceeded in population by Marquette and Escanaba.

In the half century of their development, Ironwood mines have

shipped more than 100,000,000 tons of high-grade ore; yet, if geological estimates are correct, only a small part of the deposits that reach into Wisconsin and Minnesota has been worked. The ore is in a sedimentary belt, steeply tilted, which necessitates deep shafts and extensive underground tunneling. The ore is broken down by drilling and blasting, loaded on cars, usually electrically operated, and transported to the mine shaft, where it is dumped into skips and hoisted to the surface.

US 2 crosses the Montreal River (here the Wisconsin Line) 139 *m.*, 1 mile north of Hurley, Wisconsin.

Tour 17

Sault Ste. Marie—Drummond Island—Cedarville—Junction with US 2; 57 *m.* State 5 and 4.

Roadbed graveled or hard-surfaced throughout; two lanes, open all year except after heavy snows
Summer accommodations throughout.

State 5 extends due south from the Soo to the area of Les Cheneaux, where it meets State 4, an east and west highway. The first part of the route covers farm lands that are checkered with dense tracts of timber, left standing to act as windbreaks and wood lots. The southern section, around Les Cheneaux, is primarily a resort and recreational area.

SAULT STE. MARIE, 0 *m.* (607 alt., 13,755 pop.) (*see Sault Ste. Marie*).

Sault Ste. Marie is at a junction with US 2 (*see Tour 16a*) and State 28 (*see Tour 18a*).

At 1 *m.*, in the northern section of the city, State 5 branches L. from US 2 (Ashmun Street).

At 16 *m.* is a junction with a side road.

Left on this road to its end on the banks of St. Mary's River, 8 *m.*; opposite is NEEBISH ISLAND (*ferry between road's end and Oak Ridge Park; car and driver 45¢, passengers 10¢ each*). The island has been settled since 1887, but has never had more than 300 permanent residents. The name Neebish (Ind., where the water boils) is no longer appropriate, since the Government cut through the rapids in the river to make a channel on the west side in 1908. From OAK RIDGE PARK (*supplies, tourist cabins*) several roads lead across the island: one to a small settlement, Neebish, in the southeastern part; one to the U. S. Coast Guard station and the Sailors' Encampment on the most easterly point; and one through clean, wooded sections left by the lumbermen who operated here between

1885 and 1892. The inhabitants derive most of their income from the tourist trade and the sale of farm products.

At 21 *m.* is a junction with County 307.

Left on this road to DODGE MUNUSCONG STATE PARK (R), 3 *m.*, once privately owned, now a game refuge under the supervision of the State department of conservation. Many of the ducks that frequent the marshes are banded annually, and deer in the woods are also tagged. Bear are occasionally seen. Elaborate lodge buildings, erected by the Dodge brothers of Detroit, are used by State research workers.

PICKFORD, 25 *m.* (450 pop.), settled in 1876, has had a post office since 1881, when mail was carried on foot to the other communities within a ten-mile radius. Flax is becoming an important crop in the vicinity, and Pickford is the region's principal marketing and banking center.

At 27 *m.* is a junction with State 48.

Left on State 48 is STALWART, 9 *m.* (250 pop.), a post office and trading center. Settlers who came here in 1878 had to cut a trail through the last four heavily wooded miles. Difficulties were also met in selecting a name for the community. First Arthur and then Garfield had to be discarded, as each had already been adopted by other Michigan communities. Stalwart was finally decided upon as the next-best name descriptive of local Republican sentiment.

South and east of GOETZVILLE, 18 *m.* (75 pop.), State 48 enters a rocky farm-land region in which great quantities of cobblestone and limestone outcroppings have been utilized in construction, as in the STONE SNOW FENCES, 23.5 *m.*, that parallel the road (L) for half a mile. These fences, about four feet high and nearly three feet thick, constructed without mortar, were built by the State highway department in 1929 to serve as snowbreaks. Similar fences, erected by farmers, border many fields.

In CARIBOU LAKE (L), 28 *m.*, bass and great northern pike abound. The lake has an excellent sandy beach and is surrounded by fine stands of birch, through which run several roads and trails. East of Caribou Lake, the route passes hardwood ridges and cedar swamplands.

The name DE TOUR, 34 *m.* (620 alt., 616 pop.), refers to the sharp turn ships had to make in order to enter St. Mary's River. De Tour is at the southeastern tip of the Upper Peninsula, at the mouth of the river through which all boats pass on their way to Sault Ste. Marie.

In the spring of 1907, an ice blockade stopped 120 boats opposite De Tour, and their smoke and lights at night created the illusion of a big industrial center. In 1918, the narrowness of the lane was responsible for the collision and sinking, within 20 minutes, of two large freighters. Consequently two channels are now maintained, one for northbound and one for southbound ships. The remains of a side-wheeler, the first steam wrecking scow to ply the river, lie in shallow water just off De Tour, and, near the crib lighthouse, a sunken cargo containing several barrels of copper is visible through the clear water.

The village, a vacation objective of motorists and yachtsmen, as well as an important fueling place for the vast commercial traffic carried by the St. Mary's during the open season, occupies a site on which as many as 3,000 Indians used to camp. At that time De Tour was a trading post, which, according to legend, was occasionally thrown into a panic by the threat of raids by pirates, who were believed to infest near-by islands. One island, *Espanore (private)*, is supposed to have been named for a Spanish pirate who, fleeing American justice, made it his hide-out; and, indeed, the deep bays and rocky shores of these densely wooded isles stir many a visitor's imagination and induce him to believe such romantic tales. During the winters of 50 years ago, the saloon keeper's storage place for his supply of beer was a lean-to, out back, where, according

to local tradition, the beer froze so hard that it was chopped off in pieces, for purchasers to carry home under their arms. In those days, gambling reached such proportions that, to forestall an imminent war with the townsfolk, the gamblers organized the Order of the Golden Fleece to cover their operations. They took the precaution of strewing the floor of the hall they had hired with cotton batting, to trick the community into believing that lodge exercises were being held.

When steam power for boats became practicable, De Tour was a logical fueling point for the wood-burning propellers, situated as it was on the edge of a territory of tremendous hardwood stands. The change to coal was met at De Tour by the construction of five coal docks. There is a municipal pier for yachts and small craft.

DRUMMOND ISLAND (*ferry between county dock at De Tour and county dock on the island; operates April 12 to Jan. 1, beginning at 7 A.M., 7 trips daily during summer and deer-hunting season, 5 trips daily during early spring and fall; fare \$1 up; trailers \$1 extra*), 87,000 acres in extent, attracts many vacationists, hunters, fishermen, and yachtsmen. Several good roads reach to all shores, and hiking trails are numerous. The island, with high, rocky shores facing the deeply colored waters of numerous irregular bays and coves, is heavily wooded, and the pollen-free air is scented by pine and balsam. Three of the trout streams on the island are kept well stocked; duck hunting is good along Potagannissing Bay; and the forests contain deer, bear, and occasional moose. There are more than 40 inland lakes, and the bays, which are protected by small, rocky, green-crowned islands, afford good anchorage. The island was named for Sir Gordon Drummond, British commander of the lake district, when the British erected a fort here, in 1815, after losing Mackinac Island to the Americans by treaty following the War of 1812 (*see Mackinac Island*). Title to Drummond Island never was secured by the British, and, when it was learned in June 1822 that the island belonged to the United States, the British evacuated their fort. The crown considered this its 'Gibraltar of the Great Lakes'; extensive fortifications, including 14 buildings, were valued by the incoming Americans at £1,820 sterling.

Two miles from the channel landing, on the southwestern promontory of the island (1.2 m. S. by auto and 0.8 m. on foot), is the SITE OF FORT DRUMMOND, marked by faint traces of its foundation walls, by the chimneys and huge fireplaces still standing, by the natural parade ground, and by the old fort cemetery. The burial ground has been maintained by private individuals, who cleared away a growth of cedars that once threatened to overrun it, some headboards remain, but the names have been worn away by the weather. Supplies and furnishings left by the British are sometimes found, and the search for these adds interest to a visit.

At the county dock is a junction with a graveled road.

Straight ahead (east) on this road 7 m. and L (north) on an intersecting road is DRUMMOND, 9 m. (150 pop.), on Potagannissing Bay, the only village on the island. Residents earn their living by catering to the vacation trade and by working in the hardwood forests and the building-stone quarries, the first of which was opened in the late 1870's to furnish stone for the first lock at Sault Ste. Marie. The earliest permanent settler was named Seaman, a Mormon minister, who came about the time the Mormons were driven from Beaver Island in 1857 (*see Beaver Island*). He was followed shortly by other Mormons. A bronze plate carrying the name of the Reverend G. D. Strickland is on the pulpit in the Congregational Church; it honors a man who not only had much to do with local religious and scholastic history, but who also ended the supremacy the Mormons had enjoyed until his arrival in 1879. He was requested to leave, and, when this method failed, he was challenged to a debate on religion, as the surest way of getting rid of him. The outcome was a defeat for Mormonism on Drummond Island.

CEDARVILLE, 37 *m.* (300 pop.), during the long windswept winters is a lonely, withdrawn community, whose members still remember the old-time sound of many saws cutting through an 'endless' stock of cedar; but it enters upon a busy life each spring with the advent of the outsiders who visit Les Cheneaux Islands across the bay. Motorcars, loaded with summer residents and vacation equipment, crowd its streets. Paralleling the highway is the Cedarville harbor, lined with many small docks.

LES CHENEAUX ISLANDS (*no regular ferry service; hotels on islands maintain guest boat service to Cedarville and Hessel; launches and speedboats for hire*) are offshore from Cedarville. Although the Snows, as the name (Fr., the channels) has been corrupted locally, are usually considered to include 40 miles of beautiful, bay-cut shore, the name applies only to the 35 islands that make up Les Cheneaux group. For nearly half a century, and without benefit of advertising, these islands have attracted crowds of summer residents and fishermen, whose presence has largely prevented the region from suffering a post-lumbering decline. The islands vary in size from Marquette Island, more than six miles long, to Dollar Island, which is just large enough to accommodate the summer cottage that has been built upon it. All are heavily timbered, and many trails lead through forests of pine, cedar, and balsam. From a distance the islands appear to be great floating rafts of greenery, each striped at the water's edge with a narrow line of white beach. The illusion of height in some of the islands is created almost entirely by the tall timber. The group at many points is separated from the mainland only by narrow channels, such as those that divide most of the islands one from another. These can accommodate boats of 8-foot draft; several are safe for boats that draw 15 feet. The islands protect the channels from the more violent action of Lake Huron waters, and small-craft boating is popular. Perch, pickerel, and bass fishing is excellent, and muskellunge weighing 43 pounds have been taken here. Lake trout are found in the open waters of Lake Huron, along the southern shores of the islands. The season, ordinarily from late June to late September, increases the population of the district by about 5,000. Houses for the accommodation of visitors range from tourists' cabins of rustic design to the mansions of the wealthy.

MARQUETTE ISLAND (*by boat; rentals at Hessel*) is named for the missionary-explorer of the Great Lakes region. The MARQUETTE MISSION SITE, on the northern shore, marked only by the fireplace and chimney of the original building, was for many years cared for by Indians, who built a shed over the spot; now the work of preserving the remaining masonry is undertaken by Les Cheneaux Club, whose spacious summer clubhouse (*private*) is on the northern tip of the island.

Cedarville is at a junction with State 4, over which the route continues (R).

HESSEL, 41 *m.* (200 pop.), shares with Cedarville the summertime trade of the thousands of visitors to Les Cheneaux Islands and shore resorts. The village is south of the highway, on the crest and face of a hill that slopes toward the harbor. Graveled streets meander without apparent design over the hill, and the clusters of houses set beside these winding lanes have a simple, unstudied charm. Along the beach are large summer homes and private docks, but there are also many plain summer cottages and overnight cabins. The principal business section is on the main road leading from State 4 to the harbor; a dozen or more docks serve two boat works and the active rental business.

In earlier days, Hessel found winter the busiest season, when the air was vibrant with the noises of lumbering activity; now it is summer that brings excitement to the village, and the turning of the leaves signalizes the closing of at least half of its houses. On several points of land near by, marking the sites of Indian villages, is the Indian grass, long and tough-fibered, that was worked with split ash in basket weaving, giving a peculiarly sweet, characteristic odor to the baskets. After the Indians had been forced out in 1870, the incoming whites used every means to beat each other in securing land rights to the valuable cedar swamplands near Hessel. Homesteaders had to record title to Government lands at St. Ignace, Mackinac County seat, 33 miles southwest. During the winter of 1892, Albert Low inspected Point Brulé, west of Hessel, and was impressed by the timber's quality. He spoke of his find to John Chadester before setting out to walk around the shore line to St. Ignace. Prospective-homesteader Chadester thought the matter over and decided to get that particular 40-acre tract for himself. Hitching his dogs to a sled, he crossed the ice of St. Martin Bay to the county seat, filed his claim, and was comfortably at home again before Low reached St. Ignace.

Hessel was considerably embarrassed, years ago, when sheriff's officers fell asleep while guarding a group of suspected kidnappers, who could see no reason, under the circumstances, for remaining. Because of the escape, a jail was erected in 1906, a tight little building, secure against future prison breaks. Ironically, the building has never been called upon to fulfil its purpose, but serves as a polling place, its single cell now a woodbox.

Students of history turned interested eyes toward Hessel in 1934, when the announcement was made that La Salle's long-lost *Grifon* (see *St. Ignace*) had been discovered among the reefs of Les Cheneaux Islands near the village. The Les Cheneaux Chamber of Commerce made plans to raise the partially burned hulk and place it on exhibition in Hessel, but the plans were abandoned because of the cost and the lack of definite proof that the submerged ship was the *Grifon*. Although popularly supposed to be La Salle's ship, there is another belief current that the hulk is one of the war vessels of 1812 used in the attack on Fort Mackinac (see *Mackinac Island*). Sailboat and powerboat races on the bay at Hessel (*July and August week-ends*) draw a large gallery of watercraft of every description and hundreds of motorcars that line the shore.

State 4 ends at a junction with US 2 (see *Tour 16a*), 57 m., 17 miles north of St. Ignace (see *St. Ignace*).

Tour 18

Sault Ste. Marie—Seney—Munising—Marquette—Negaunee—Wakefield; 312 m. State 28.

Roadbed hard-surfaced or graveled throughout; two lanes, closed only during severe winter storms.

Duluth, South Shore & Atlantic Ry. roughly parallels route.

Summer accommodations at short intervals; year-round hotels in the larger cities.

Crossing the northern section of the Upper Peninsula, State 28 traverses some of the country described in Longfellow's poem, *The Song of Hiawatha*. The Grand Sable Banks and the Pictured Rocks of the poem remain, but the forests and the Indians are gone. The first half of the route is through former timber lands, wild and unsettled, that are fast being developed as recreational and forest lands by State and Federal conservation agencies. In the Marquette region are the rugged hills, with bald rock outcroppings, where iron ore was first discovered in Michigan. Throughout the region, fishing, hunting, and camping bring thousands of visitors annually, and providing for them has become a major industry.

Section a. SAULT STE. MARIE to NEGAUNEE; 184 m. State 28.

SAULT STE. MARIE, 0 m. (607 alt., 13,755 pop.) (*see Sault Ste. Marie*).

Sault Ste. Marie is at a junction with State 5 (*see Tour 17*) and US 2 (*see Tour 16*), with which State 28 is united for 6 miles south of the city.

WAIKA BAY (R) 13 m., where Lake Superior narrows into the St. Mary's River, is visible from State 28. The bay was named for Waishkai, chief of a local Chippewa tribe.

At 14.5 m. is a junction with a narrow graveled road.

Right on this road to BRIMLEY STATE PARK (*camping, electricity*), 0.5 m., a densely wooded tract of 38 acres on Waika Bay.

State 28 crosses the Waika River, 15 m., near the point where it flows into the bay. West of the bridge is a junction with a graveled road.

Right (*straight ahead*) on this road to a junction with another graveled road, 2.7 m.; R. here to the BAY MILLS INDIAN MISSION, 4.5 m., a tract of 570 acres, which is the home of about 150 Chippewa, descendants of the powerful Ojibway nation that once controlled the entire Upper Peninsula. Near the mission is an

old burial ground in which the Chippewa interred their dead with traditional rites. Today, the men of the mission work on the roads in the summer and fish through the ice for herring and lake trout during the winter.

Right from the mission on a dirt and graveled road to the **SITE OF BAY MILLS**, 5.5 *m.* Settled in 1882, when a sawmill was established at this point on the St. Mary's River, the village grew rapidly. A sash and door factory was established in 1890. A boat slip in the river was deep enough to accommodate the largest vessels, as they delivered lumber and reloaded with sashes and doors for the Eastern markets. The factory burned in the spring of 1904, and a large part of the population, which had grown to 1,200, moved away. When the sawmill exhausted the timber and ceased operations in 1909, the community's industrial structure collapsed, and Bay Mills faded as quickly as it had grown. Only vestiges of stone and concrete foundations remain, the red bricks embedded deeply in the hard-packed road were once the paving of the main street. The only residents are vacationists seeking isolation from cities.

BRIMLEY, 15.5 *m.* (430 pop.), settled in 1872, is an agricultural and commercial fishing community. Originally called Superior, the village changed its name to oblige the Duluth, South Shore and Atlantic Railway, which had its western terminal at Superior, Wisconsin.

For the next 50 miles, between Brimley and Newberry, State 28 winds through young pine forests, cedar swamps, and crosses hardwood ridges. There are few settlements. Along stretches of the highway, maple and birch line the road on both sides, veiling the scarred lands where the last big trees were logged off during the 1930's. The State Highway Department maintains these roadside forests both for their beauty and for their value as snow traps. The thick, tangled cedar thickets are part of the Tahquamenon Swamp that reaches north to Lake Superior. This land is used chiefly for limited cuttings of cedar and as a hunting and fishing area. Uniform stands of newly planted pine along the highway demonstrate the reforestation program, carried on throughout Michigan by both State and national agencies.

State 28 enters the eastern boundary of the **MARQUETTE NATIONAL FOREST** at 21.5 *m.*

RACO, 25 *m.* (350 pop.), and **REXFORD**, 30 *m.* (10 pop.), former important lumber-loading stations on the Duluth, South Shore and Atlantic Railway, are almost indiscernible from the highway. Today only occasional carloads of posts are loaded at these stations.

At 32 *m.* is a junction with a graveled road.

Right on this road to **STRONGS**, 08 *m.* (762 pop.), in an area where there is still some cutting of hardwood timber and pulpwood. The community was settled in 1899 by 15 families who came to work in the woods and in a shingle mill.

At 40 *m.* is the junction with State 123 (*see Tour 18A*), which leads north into the Whitefish Bay country.

At 45.5 *m.* is a junction with an earth road.

1. Left on this road to the **HULBERT LAKE CLUB** (*cottages, dining room*), 0.4 *m.*, a private resort of 4,800 acres on the heavily wooded shores of Hulbert Lake. The lake is well stocked with Mackinaw trout, perch, black bass, and northern pike.

2. Right on the earth road to **HULBERT**, 2 *m.* (300 pop.), known for its winter deeryards. Feeding of deer in this district was begun by S. R. Freeman,

the village barber. As a result of his efforts, other experimental feeding stations were established in the Hulbert area by the State department of conservation. A large number of deer frequent the yards in winter.

At 51.5 m. is a junction with a graveled road.

Right on this road, which leads through a cedar swamp, to SOO JUNCTION, 2.5 m., the point of departure for boat excursion to Tahquamenon Falls. No highway reaches into the virgin timberland to the north, so that it is necessary to abandon automobiles here and entrain on a narrow-gauge railway with open cars for the five-mile trip to the Tahquamenon River, where a boat takes passengers to the Falls. (*Round trip fare, by train and boat, \$2 for adults, \$1 for children under 15 years; includes protected parking for motorists' cars during excursion; one round trip daily, leaving Soo Junction at 10 A.M. and returning to Soo Junction at 6.30 P.M.*)

At HUNTERS MILL, 7.5 m., the site of an abandoned lumber camp, passengers transfer to boats. The Tahquamenon River, winding through a tangled wilderness, flows into Lake Superior at Whitefish Bay (*see Tour 18A*). Millions of feet of timber were floated down this river during the pine era, and many of the old logging trails ending at the water's edge are visible from the excursion boat. It is this river, sometimes known as the 'dark river' or the 'golden river,' that plays so prominent a part in Longfellow's epic poem, *Hiawatha*.

The river's course varies capriciously, as it threads its way through broad, swampy lowlands, past thickly forested ridges, past stretches of aromatic cedars, and between steep stone cliffs 100 feet or more in height. Slipping down the stream, the boat rouses wild ducks to flight and holds, momentarily, the startled attention of deer, of bear, beaver, muskrat, and other animals. The route passes the bank where Hiawatha built his birchbark canoe, and over the aquatic grave of Hiawatha's friend, Kwasind, the man who was beaten in the heroic river conflict with the diabolic otters.

The boat trip, which lasts two-and-a-quarter hours, ends three-quarters of a mile above the UPPER FALLS, the low thunder of which is constant. A foot trail leads through heavy, unscarred woods to a vantage point near the brink of the falls, then proceeds down a sharp incline to the bottom of the gorge, where the escarpment furnishes the best view.

Over the brink of the falls, extending 200 feet in sweeping arcs framed between high sandstone walls, the pounding waters leap down the face of a 40-foot cliff.

A trail leads through the hardwoods to the Cataracts, or LOWER FALLS, 6 miles farther downstream. The river, broadening over wide ledges in its rocky course, swirls through long stretches of boiling rapids and comes to rest in Lake Superior at Whitefish Bay (*see Tour 18A*).

At 62.5 m. is the eastern junction with State 28A (State 48).

Right on State 28A (State 48) to the NEWBERRY STATE HOSPITAL (L), 2.5 m., an institution for the mentally incompetent. The property covers 900 acres and, with 20 cottages and a receiving hospital, is valued at more than \$1,600,000.

NEWBERRY, 4.5 m. (772 alt., 2,465 pop.), is a small woodworking and trading center in the Tahquamenon Valley. Lumbering has been going on here since the Civil War. By the time all the pine on the plains to the north and the hardwood and mixed groves on the hills to the south had been cut, a heavy second-growth was ready in many sections. Among the factories utilizing this timber is the NEWBERRY LUMBER AND CHEMICAL COMPANY PLANT (*by special arrangement, a company-owned logging train will accept passengers to the modern logging camps*), founded in 1882 as a charcoal kiln and iron-furnace venture. In the 64 kilns about the furnace, thousands of cords of hardwood were converted into charcoal for use in smelting iron ore. After a decade, the process of manufacturing charcoal was changed; the kilns were replaced by retorts, and the gases that had previously escaped were distilled into by-products, such as wood alcohol and lime acetate. In 1910, a sawmill was added to make use of the better grades of timber. Thousands of visitors use Newberry

as a base for hunting and fishing expeditions. There is considerable farming in the region; 'Newberry Celery,' used by many fine hotels, is grown here.

Left from Newberry on State 28A (W. McMillan St.) to DOLLARVILLE, 6 m. (100 pop.), named for Robert Dollar, who rose from 'cookee' in a Michigan logging camp to a position as a world-famous shipping magnate. Dollar is said to be the 'Cappy Ricks' of Peter B. Kyne's stories; with his volatile nature and unpredictable actions, he was as unique a character in real life as 'Cappy' was in fiction.

Old settlers say that Dollar induced a group of Edinburgh Scotsmen to build a mill on the Tahquamenon River, without first buying standing timber in the locality. When they sought to acquire the adjoining stands, prices became prohibitive and the enterprise failed. The Peninsula Land Company, in which Dollar was also interested, took over the mill and bought from the Duluth, South Shore and Atlantic Railway lands that had come to the line in the form of State grants. Before operations began, the new company discovered that its charter gave it no legal right to cut the timber or use the Tahquamenon River, and so abandoned the project.

The Dollarville Lumber Company, obtaining a charter with full rights to cut and float logs, gained control of the mill and timber holdings. The dominant figure in this concern was Robert Dollar, who now felt confident of success. But his timberlands extended downstream from the mill, and logs could be rafted only with the current. In an effort to overcome this difficulty, Dollar leased a boat and began barging his logs to the plant, but transportation proved so expensive that even Dollar could not make the mill pay. A few years later, he abandoned the lumber industry to build a mercantile fortune on the sea. (South of Dollarville, State 28A rejoins State 28, 9 m.)

At 66 m. on State 28 is the western junction with State 28A (*see above*). At 72.5 m. is a junction with State 98.

Left (*straight ahead*) on State 98 to HELMER, 4 m. (10 pop.), a wayside village that serves as a supply point for the summer colonies in the region of MANISTIQUE LAKE, the second-largest lake in upper Michigan, 10,100 acres in area, but with a maximum depth of only 25 feet. Sections of the shore line are marshy and overgrown with weeds and rushes, providing excellent cover and feeding grounds for fish, muskrats, and waterfowl. Ahead on State 98 is LUCE COUNTY PARK (*camping, bathing, picnicking*), 4.3 m (R), an extensively developed camping site on the south shore of North Manistique Lake.

In McMILLAN, 74.5 m. (300 pop.), once a supply base for lumber and charcoal camps, pulpwood cutting and farming are the chief activities.

SENEY, 87.5 m. (150 pop.), in the Cusino State Game Refuge, was the toughest spot in Upper Michigan during the 1880's and 1890's. Drifting tales of license and corruption brought to Seney an investigating committee of newspaper reporters, among them one of the few women reporters of the day. Unimpressed by the gambling, fighting, drinking, and prostitution, she began her reports with a story of the 'Ram's Pasture.' Yes, she wrote, the rumors from wild Seney were true—and more, the place was a hell camp of slavery! Strangers were being 'shanghaied' on the frontier, shunted into camp, held in chained peonage, and tracked by fierce dogs when they attempted escape. Forced to work in the forests by day, they were marched into camp at nightfall and held in the 'Ram's Pasture,' a stockade unfit even for dumb animals. The place was so overcrowded that the chained men were forced to sleep in shifts.

This story made the headlines in metropolitan dailies throughout the country. A congressional committee was kept out of the district only through efforts of Wall Street lumbermen and Michigan politicians, who denied the story indignantly, stating that a hoax had been played upon the newspaperwoman by obliging practical jokers who wanted her to find what she was looking for. They declared that the 'fierce dogs' were mastiffs raised by a local saloon keeper for the general market; that the 'Ram's Pasture' was the main floor of a crowded hotel, where the manager permitted men to sleep in eight-hour shifts on payment of regular rates in advance, and that the 'armed guards' merely insured the prompt removal of the sleeping men. There was no slavery, no shanghaiing, no stockade. Everyone was completely free. In fact, abuse of freedom was the cause of the trouble. Officials were mollified by this report, but the general public was never quite convinced. The first story had been so sensational that there are people in Michigan today who still believe the old tale.

Whether or not there was slavery, the lawless reputation of Seney was not unearned. Few places of its size ever had quite so many picturesque characters as this mad community. The most notorious figure of the group was the section hand, Leon Czolgosz, who later assassinated President William McKinley. Another was P. J. Small, better known as 'Snap Jaw,' who regularly earned drinks and food by biting off the heads of live snakes and frogs. Extending his talents one day, he snapped off the head of a lumberjack's pet owl, and the woodsman laid him low with a peavey handle. 'Stuttering' Jim Gallagher left his mark—mostly with rough hobnail shoes—on the faces of those who found his speech amusing. 'Protestant Bob' McGuire was a peaceful man with thumbnails like miniature bowie knives; he seldom fought, but, when he did, his opponent emerged from the combat with gaping wounds across his face.

'Stub Foot' O'Donnell and 'Pump Handle Joe' met incoming trains, stood strangers on their heads and shook out their loose change. 'Old Light Heart,' who liked raw liver and slept in two sugar barrels turned end to end, eventually lost his toes by frostbite. Whenever he got drunk after that, 'Pump Handle Joe' and his crony, 'Frying Pan Mag,' amused themselves by nailing his shoe toes to the floor. The slickest gambler about the place was 'Wiry' Jim Summers, who wore two guns in sight but carried in his clothes a derringer, with which he went to work after an enemy apparently had disarmed him. 'Fighting Jim' Morrison was undisputed king of the duck-board sidewalks, and those who failed to give way when they met him simply 'weren't real bright.' The local Paul Bunyan was 'Big Jim' Keene, boss of the woods, who ran half a block with a bowie knife in his heart before he died. In the fiercest rough and tumble battle in the annals of the village, fought by 'Wild Hughie' Logan and 'Killer' Shea, ears were bitten off and eyes were gouged out, and the men fought until both were exhausted and neither was victor.

Because the Fox River regularly overflowed, all of Seney's houses were originally built on piles. Since lumbering days the river bed has been cleared, and modern buildings have been set on normal foundations. The sober quiet of the village is a disappointment to old-timers and their descendants, who come here expecting to find some degree of the frontier spirit that made the place notorious.

1. Right from Seney on State 77 to GRAND MARAIS, 25 *m.* (650 pop.), the only harbor on the Superior coast between Sault Ste. Marie and Munising. A commercial fishing center early in its history, Grand Marais later exploited the forest. Today its isolation attracts visitors. A dozen fishing tugs still operate out of the harbor, and fresh whitefish and trout are standard items on the menus of Grand Marais restaurants. Excursion boats are available for chartered trips to the Grand Sable Banks and Pictured Rocks (*see Tour 18b*) on the south shore of Lake Superior.

Left from Grand Marais on the Grand Sable Lake Road to a turn in the road, 1.4 *m.* At this point a wagon road (*straight ahead*) crosses a field for some 300 yards, then gives way to a footpath (R) which leads another 300 yards through the woods to the GRAND SABLE FALLS, where the Grand Sable River tumbles down a series of rocky shelves on its way to Lake Superior.

At 2.1 *m.* on the Grand Sable Lake Road is a junction with another graveled road; R. on this road to spring-fed GRAND SABLE LAKE (L), 3.2 *m.*, which has a small resort development on its southern shore (*camping and picnicking*). Within a few feet of the shore, the lake bottom drops sharply 25 feet, attaining a depth of 85 feet near the center.

Skirting the dark waters of Grand Sable Lake, the road becomes a narrow hard-packed wagon track leading through dense virgin hardwood. In places, a car has less than a foot of clearance on either side.

At 7.6 *m.* the road enters a clearing and intersects a sand trail; R. on this trail a short distance to the GRAND SABLE BANKS (R), 7.7 *m.* More than 200 feet high, the steep dunes extend nearly five miles along the Superior coast. Although their forms shift with the vagaries of the wind, they keep their general pattern, dipping sharply to the very edge of the water. A footpath leads a few feet over the crest of the Banks to a sodded shelf that affords an excellent view of the dunes to the east and Au Sable Point Lighthouse to the west. These extensive sandy wastes, great sounding boards that intensify the thunder of the waves against the shore, are the Nagow Wudjoo sand dunes of *Hiawatha*:

Then along the sandy margin
Of the lake, the Big-Sea Water,
On he sped with frenzied gestures,
Stamped upon the sand, and tossed it
Wildly in the air about him;
Till the wind became a whirlwind,
Till the sand was blown and sifted
Like great snowdrifts o'er the landscape,
Heaping all the shores with Sand Dunes,
Sand Hills of the Nagow Wudjoo!
Thus the merry Pau-Puk-Keewis
Danced his Beggar's Dance to please them.

2. Left from Seney on State 77 to BLANEY PARK, 16 *m.* (49 pop.), and a junction with US 2, 17 *m.* (*see Tour 18b*).

West of Seney, State 28 passes two small railroad loading stations, VALSH, 98.5 *m.*, and THE PINES, 104 *m.*, villages of considerable size during the lumbering years.

SHINGLETON, 112.5 *m.* (200 pop.), is named for a shingle mill that operated here in the early 1880's. The surrounding country is chiefly wild land, within the borders of the Cusino State Game Refuge and the Hiawatha National Forest.

Right from Shingleton on State 94 to a junction with a graveled road, 5 *m.*; R. here to MELSTRAND, 95 *m.* (50 pop.), an isolated village that still carries on some small lumbering activity.

Right on an earth road in the southern section of Melstrand to the CUSINO STATE GAME REFUGE HEADQUARTERS, 12.8 *m.*, where the game division of the Michigan Department of Conservation has an extensive moose and deer research station. Established in 1936 for a five-year period, the project is concerned with finding a suitable winter food for deer in the over-browsed deeryards. Between 50 and 60 deer receive careful study in the 14 pens at the station. Figures are being prepared on the food preferences of deer at different seasons, the minimum amount necessary to keep the animals alive during winter, and the amount of water needed in summer months. Research activities also include studies of such parasites as the lungworm, liver fluke, wood tick, nose grub, and lice, which often weaken the deer to such an extent that death results from pneumonia.

A small falls (R) threads over a rocky hill at the junction with State 178, 122 *m.*

Right (*straight ahead*) on State 178 to MUNISING (Ind., place of the big island), 1.7 *m.* (625 alt., 3,945 pop.). Closely ringed on three sides by sharply rising hills, the city faces Grand Island, which forms the northern barrier of the harbor. Munising for centuries was the camping place of Ojibway, to whom Grand Island was known as Gitchi-Menensing. The latter half of this name, slightly changed, was applied to the white settlement on the mainland.

During the 1850's, a group of land speculators made a survey of this spot and issued a map showing lots, with parks, streets, and avenues, on the shores of Munising Bay. The Civil War killed this attempt to sell a phantom city in the wilderness, and it was not until iron furnaces were started at Munising in the 1870's that the community developed in earnest. The Munising furnaces ceased operations in 1877, but the institution of a tannery and several sawmills in 1895 created a second boom. Thereafter Munising developed swiftly. The settlement was incorporated as a village in 1897 and as a city in 1919.

The MUNISING PAPER MILL (*open by permission; tours*), in the eastern part of the city, produces about 80 tons of paper daily; the WOODENWARE FACTORY (*open by permission*) at the junction of State 94 and State 178, manufactures maple salad bowls and scores of other wooden articles for domestic and export trade. On the western edge of the city is the JACKSON-TINDLE SAWMILL.

Speedboats and cruisers make scheduled trips from Munising to the Pictured Rocks (*see Tour 18B*), to Grand Island (*see Tour 18B*) (*lv Munising City Dock 9:30, 11:30, 5:30*), and on lake-trout trolling expeditions into Lake Superior (*lv Munising City Dock 5 A.M. and 12 noon; return 12 noon and 7 P.M.*). Cruisers are available for special trips.

1. Left from Munising on State 94 to the MUNISING TOURIST PARK (*camping, bathing*), 3.8 *m.* (R), a municipally owned area of 40 acres, heavily wooded with pines, on Munising Bay.

2. Right from Munising on State 94 to Tannery Falls (R), 3.1 *m.*, reached by a 200-yard footpath that leads along the base of a high sandstone cliff. At Tannery Falls, the Munising River flows over the horseshoe rim of the cliff into a narrow, shaded gorge 50 feet below.

At Tannery Falls is a junction with a graveled road; L on this road 0.6 *m.* to MUNISING FALLS (R), a 50-foot drop over a sandstone rim. There is also a steep rapids with a drop of about 25 feet.

Straight ahead on State 94 from Tannery Falls to a junction with a graveled road, 7.2 m.; L. here to the junction with an earth road, 11 m.

Right on the earth road 0.6 m. to MINER'S FALLS (R), reached by a footpath and steps descending the canyon wall to the foot of the falls. This waterfall, 75 feet high, is the largest and most beautiful in the Munising area.

Straight ahead on the graveled road, through a dense growth of virgin hardwood, to PICTURED ROCKS STATE PARK (*camping*), a 212-acre site on a bluff 250 feet above Lake Superior. From the top of the bluff are excellent views of Lake Superior, Grand Island, and MINER'S CASTLE, one of the Pictured Rocks formations (*see Tour 18B*).

The HIAWATHA NATIONAL FOREST MONUMENT (L), 129.5 m., built of stones and shaped like a tepee, was dedicated in 1931.

FOREST LAKE, 134.5 m. (220 pop.), is a former logging community. A power development on the Au Train River at the western edge of the village pipes water from the dam to the powerhouse below the Au Train River Falls a half mile south.

At 135 m. is a junction with a graveled road.

Right on this road, through arching hardwood trees, past 900-acre AU TRAIN LAKE (R), 57 m., to AU TRAIN (from *En Traneau*, Fr., by sleigh), 7 m. (150 pop.), on Lake Superior at the mouth of the Au Train River. Groves of Norway pine shade this little-known summer resort, and a sand beach lies along the river and lake. Fishing waters, hunting grounds, and berry marshes made Au Train a favorite camping place of the Ojibway and an important stop for the French *voyageurs* on their trips along the south shore of Lake Superior. In logging days, it was a dog-team stop on one of the first mail routes in the Upper Peninsula.

CHATHAM, 139.5 m. (250 pop.), a farming community, is the home of the 820-acre MICHIGAN AGRICULTURAL EXPERIMENT STATION, established in 1895. Equipped with modern buildings and implements, the station conducts agricultural experiments in connection with the Michigan State College of Agriculture and Applied Science at East Lansing (*see Lansing*). The Farmers' Roundup, held late every summer, is sponsored by the management of the Experiment Station.

EBEN JUNCTION, 142 m. (400 pop.), is populated almost exclusively by Finlanders. Builders in the community occasionally constructed a peculiar type of roof top known as the *walmdach*. This style of roof is of uneven pitch in every quarter; the front is steep, the back long and well spread out, and the intervening sections slope at varying degrees. This unusual type of architecture is imported from Finland, where early snows must be retained as a protective blanket.

At 148 m. is a junction with a graveled road.

Right on this road, to a footpath, 2.2 m., which leads three-fourths of a mile through the woods to LAUGHING WHITEFISH FALLS, 3 m., a series of cascades on Laughing Whitefish River, with a total drop of nearly 100 feet. These are in an 8,000-acre tract of hardwood purchased in 1938 by Henry Ford.

The GREAT LAKES FOREST EXPERIMENT STATION (R), 150 m., was established by the U. S. Forest Service on 640 acres of land donated by the Cleveland Cliffs Iron Company in 1926. The tract was later increased to 5,000 acres. Among problems investigated are experimental

methods of hardwood logging, increasing the productivity of cut-over lands, and breeding and selecting better strains of forest trees.

At 164.5 *m.* is a junction with County 480.

Left on this road to a junction with a graveled road, 2 *m.*; R. on the graveled road to the CHERRY CREEK FISH HATCHERY (L), 24 *m.*, which supplies fingerling trout to the streams of the central Upper Peninsula.

HARVEY, 167.5 *m.* (180 pop.), on the Chocoday River, near the shore of Lake Superior, is a former agricultural community that is developing into a summer resort.

MARQUETTE, 171 *m.* (602 alt., 14,789 pop.) (*see Marquette*).

Right (*northwest*) from Marquette on County 550 to SUGAR LOAF MOUNTAIN, 6.5 *m.*, reached by foot trails from a parking space beside the road. The wooded summit affords a wide panorama of lakes and hills.

West of Marquette, State 28 enters the Marquette iron country. At 173.5 *m.* is a junction with a concrete road.

Left on this road to a junction with a hard-surfaced road, 11 *m.*; L. here to MARQUETTE STATE PARK (*camping, picnicking*), 17 *m.*, a densely wooded area of 139 acres. Occupying a ridge between the Dead River and Carp River Valleys, it is one of the few State parks in Michigan without water frontage.

NEGAUNEE (L), 184 *m.* (1,564 alt., 6,552 pop.) (*see Tour 19a*), is at a junction with State 35 (*see Tour 19a*).

Section b. NEGAUNEE to WAKEFIELD; 128 m. State 28.

West of NEGAUNEE, 0 *m.*, State 28 leaves the Marquette iron country to cross a region where dairy lands and farm clearings have replaced the sawmills and lumber camps. Beyond is the vast extent of the Ottawa National Forest, at the base of the copper country of the Keweenaw Peninsula. The history of the mining and lumbering villages is a story of exhausted resources and stranded populations. Once thriving communities that had populations near the thousand mark are now crossroads stores or gasoline stations. Near the western end of the route are the wild hunting and fishing areas of the Lake Gogebic region and, at Wakefield, again the iron country.

ISHPEMING (L), 3 *m.* (1,400 alt., 9,238 pop.), takes its name from an Indian word meaning 'high grounds' or 'heaven.' Attracted by the purity of the Marquette Range ore, the Cleveland Cliffs Iron Company and the Oliver Mining Company have established headquarters in the city, and Henry Ford has opened a mine near by. Explosives for mine blasting are in such great demand that two big powder concerns have found it profitable to maintain local branches. The second active mine in Michigan was opened in this community while the place was still a camp. Because deposits here were richer and more widely distributed than elsewhere, Ishpeming outstripped all neighboring cities in production, growth, and wealth. Most of the major pits are moderately active.

Following the lead of Red Wing, Minnesota, a group of Norwegians in Ishpeming formed the Norden Ski Club, probably the first ski club in Michigan, and held their first jumping contests in February 1888. Three years later, Ishpeming was host to jumpers from three States and, in 1905, was instrumental in forming a national ski association. Each winter, at the Ishpeming Ski Tournament on February 22, skiing enthusiasts from the Middle Western States flock to the city. When the original runway was destroyed in 1914, plans were made to build a larger slide, and a hill was selected on Cliff's Drive near the eastern edge of the city. The ski jump here, built in 1925, has a vertical height of 280 feet and a length of 860 feet. The original slide had a gap of 78 feet between the take-off and the landing hill, earning for it the name of 'Suicide Hill,' but this gap was later filled in to avoid accidents. At MUD LAKE, near Ishpeming, Lewis H. Morgan made the observations for his book, *The American Beaver and Its Works*, a standard authority on the subject.

1. Left (*south*) from Ishpeming on Pine Street is NATIONAL MINE, 3.2 m. (1,000 pop.), a residential community for workers in a near-by iron mine and in the HERCULES POWDER COMPANY PLANT (*not open*), which supplies explosives for many Upper Peninsula mines. In 1911, the plant blew up, killing 11 people; a similar disaster in 1921 took four lives.

Left from National Mine on Cliff's Drive to a junction with a graveled road, 5.4 m.; R here to the TILDEN IRON MINE, 5.8 m., one of the largest open pits in the Marquette Range. Here the ore, which is 47 per cent iron, is blasted from the hillsides and loaded into ore cars.

2. Right (*north*) from Ishpeming on 2nd St., past DEER LAKE (R), 3 m., formed by an outlet dam designed to control the flow of water on the Carp River to the dams below at Marquette, to the junction with a graveled road, 3.7 m.; L. here to the ROPES GOLD MINE, 4 m., at one time the largest in the State. From 1883 to 1897 this location produced bullion valued at \$647,902 under the old rating. Buildings and trestlework, abandoned when the lode was no longer profitable, still stand, and the piles of ore-bearing quartz are the delight of souvenir hunters. When the price of gold was increased in the 1930's, many individual prospectors worked the tailings at the old mine, in some instances panning out day wages from the discarded ore.

At 9 m. is a junction with a graveled road.

Right on this road to the BARNES-HECKER MINE (R), 0.5 m., in which the worst disaster of Michigan's iron industry occurred on November 3, 1926. Here 52 men were trapped 1,000 feet below the surface. Recovery of the bodies was impossible. The management sealed the shaft and moved the machinery elsewhere, leaving the steel framework of the mine derrick to mark the miners' tomb.

At 1.6 m., on the graveled road is a junction with a similar road; R. here to the MICHIGAN GOLD MINE, 2.2 m., discovered in 1888, which yielded about \$90,000. In 1932, a stock company reopened the mine, producing about \$6,000 in bullion; this second attempt ended in the fall of 1937.

At 15.5 m. is a junction with State 95.

Left on State 95 to REPUBLIC, 8 m. (1,090 pop.), also known as Iron City, settled in 1871. In the following year, 11,025 tons of ore were shipped from the Republic Mine. The West Republic and Columbia Mines were opened later. Because Republic ore was 88 per cent pure iron, operations continued steadily

until 1927. The village is strewn with huge piles of blue rock, evidence of extensive mining operations. West of the village, the broad backwater of a dam on the Michigamme River affords canoeing, fishing, and camping sites. Southward, State 95 leads to IRON MOUNTAIN, 55 *m.* (1,150 alt., 11,652 pop.) (*see Tour 16b*).

CHAMPION, 20 *m.* (300 pop.), was settled in 1863, four years before the Champion Mine was opened. In 1910, when the mine closed after reaching a depth of 2,078 feet and producing 4,413,170 tons of ore, Champion had a population of 2,500. Most of the miners drifted away; some turned to agriculture, and the region around Champion is now devoted chiefly to potato growing.

CHAMPION BEACH PARK (L), 21.5 *m.*, a 370-acre tract on the east shore of Lake Michigamme, can accommodate 15,000 campers. Throughout the heavily wooded area are stoves, tables, and free wood for picnickers. The beach is patrolled by lifeguards. LAKE MICHIGAMME, 4,000 acres in area, is one of the oldest resort developments in the Upper Peninsula.

At 25 *m.* is a junction with a graveled road.

Left on this road to PRESBYTERY POINT, 14 *m.*, a summer institute for young Presbyterians in the Lake Superior area. Established in 1937, the institute attracts between 20 and 50 delegates for the one- and two-week sessions.

At 25.5 *m.* is a junction with another graveled road.

Left on this road to MICHIGAMME INSTITUTE, 05 *m.*, a 37-acre tract on the lake front owned by the Methodist Church. Summer sessions are similar to those at Presbytery Point.

MICHIGAMME, 28 *m.* (300 pop.), was settled on the site of an iron-ore discovery in 1872. The Michigamme Mine, abandoned in 1905, produced 935,880 tons of ore during 33 years of operation.

For 23 miles, between Michigamme and Covington, the highway crosses wild unsettled country. An extensive tract of hardwood land, at the western junction with US 41, 42 *m.*, is owned by the Ford Motor Company. US 41 leads northward 17 miles to L'Anse (*see Tour 20A*).

COVINGTON, 51 *m.* (100 pop.), a small Finnish community in the heart of the Baraga deer country, plays host to many hunters annually. The FINNISH LUTHERAN CHURCH, on US 141 in the southeastern section of the village, a frame building with an octagonal belfry and steeple, was redecorated recently with the assistance of the Finnish Consul at Chicago, a member of the Chicago Institute of Arts. Art students and decorators from Chicago painted the murals depicting the Lord's Supper and other Biblical events, installed stained-glass designs representing simple farm operations, and added an apse with modern lighting fixtures. No attempt was made to reproduce traditional art—the church reflects freely its American setting.

At 53 *m.* is a junction with a graveled road.

Right on this road to STURGEON RIVER, 3 *m.*, one of the streams draining the BURNT PLAINS of Wissakodi Country to the north. Before white settlement began, Wisconsin Indians, after wintering in the heavy timber, often camped in this district, where game was plentiful. Late in the summer, when weather and winds were favorable, they went north a few miles, fired the woods between two streams, and slaughtered the fleeing deer, drying and preserving the meat for winter. In spring, fresh grass and young sprouts heavily overgrew the burned area, attracting new herds of deer. Eventually the larger trees were destroyed, and the burnt strip became a plain of bushes and grasses, prized hunting grounds.

WATTON, 54.5 *m.* (25 pop.), is another Finnish community developed since 1900 as a trading center for an agricultural area.

State 28 crosses the eastern boundary of the Ottawa National Forest at the LAC VIEUX DESERT TRAIL, 55 *m.*, an old Indian pathway between Burnt Plains and Lac Vieux Desert (*see Tour 20*). The Indians, after the land was taken from them, still used the trail when going to L'Anse (*see Tour 20A*) for Government allotments. It was on this trail, according to some historians, that Father René Menard, while on a mission to Wisconsin in 1665, became separated from his guide and either succumbed to illness and starvation or was killed by natives.

SIDNAW, 60 *m.* (500 pop.), KENTON, 69 *m.* (400 pop.), and TROUT CREEK, 75 *m.* (450 pop.), in a sandy area once covered by a magnificent stand of white pine, are agricultural communities. In Trout Creek a sawmill operates periodically.

AGATE FALLS (R), 78 *m.*, reached by a 200-yard footpath along the river bank, drops over an 80-foot ledge that crosses the Ontonagon River.

BRUCE CROSSING, 86.5 *m.* (127 pop.), a dairying community in a section of cut-over pine lands, is at a junction with US 45 (*see Tour 20*).

EWEN, 91.5 *m.* (350 pop.), was settled during the 1850's on pine lands claimed under the provisions of the Homestead Act. Dairy herds now graze on the cut-over lands. In the northern section of the village is a small sawmill cutting second-growth timber.

BERGLAND, 108 *m.* (600 pop.), named for an early sawmill operator, has been transformed from a logging village into a farming community and a summer resort center. On the lake front is BERGLAND TOWNSHIP PARK, with facilities for swimming, camping, and boating.

West of Bergland State 28 swings around the northern shore of LAKE GOGEBIC (*see Tour 16c*), through a heavy stand of hardwoods. On and near the road are the sites of several communities that attained local prominence during logging operations but, later, faded into oblivion. Numerous summer resorts are scattered along the shores of the lake, many of them on State 64 (*see Tour 16c*), with which State 28 forms a junction at 112 *m.*

State 28 ends at WAKEFIELD, 128 *m.* (1,000 alt., 3,677 pop.) (*see Tour 16c*), which is at a junction with US 2 (*see Tour 16c*).

Tour 18A

Junction with State 28—Eckerman—Whitefish Point; 36.5 m. State 123.

Roadbed graveled and earth, double lane for most of its length; in good condition summer and fall.

Hotel accommodations at Emerson and Shelldrake; camp sites at intervals, also housekeeping and overnight cabins.

The three communities along this route, shadows of robust lumber camps, look to an increasing tourist trade for economic security, when minor lumber operations shall have ceased. The route covers the eastern fringe of the great Tahquamenon Swamp, one of the wildest sections of Michigan. Between Emerson and Whitefish Point, State 123 is a link in what will be eventually an attractive route along Lake Superior between Sault Ste. Marie and Munising (*see Tour 18a*). For a few miles west of Whitefish Point, the highway was graded, but unpaved, at the beginning of 1940. Occasionally it leaves the shore, but for short distances only.

State 123, north from its junction with State 28, 0 m. (*see Tour 18a*), penetrates a land of cedar swamps and vast second-growth forests.

ECKERMAN, 2 m. (200 pop.), in its early days was a supply depot for district logging camps. Near the end of the last century nearly a dozen of these camps were in the woods near by, but by 1939 the only evidence of lumbering activity was the operation of one small sawmill. In the swamplands to the west, the Two Hearted and Tahquamenon River districts, thousands of acres of pine and hardwood cannot at present be logged profitably, because of difficulties in transporting men and materials. At Eckerman is the TAHQUAMENON TROUT REARING STATION, which annually produces 1,000,000 brook trout for planting in Chippewa County streams.

THE KNOWLTON LUMBER CAMP, 9.5 m., is owned by one of the last two firms still engaged in logging operations in this district.

THE UNITED STATES INDIAN TRAINING STATION (*visitors welcome*), 11.5 m. (L), is conducted in co-operation with the U. S. Forest Service. The camp, under the supervision of the Great Lakes Indian Agency, accepts Indians from both the Upper and Lower Peninsulas. Its operation is similar to that of CCC camps, but without military administration.

EMERSON, 17.5 m. (25 pop.), once the thriving center of large-scale pine lumbering, is now a tiny village overlooking Whitefish Bay.

Nearly all of the villagers are engaged in commercial fishing. Nets on reels along the shore and the fishing tugs at anchor in the bay lend diversity and charm to the scene. A citizen has recently deeded the State of Michigan more than 2,000 acres at Emerson and the Tahquamenon River mouth. A clean, gently sloping sand beach extending 16 miles north of Emerson is an important asset of this beautiful, isolated country.

THE TAHQUAMENON RIVER, 18 *m.*, is spanned by the roadway at Whitefish Bay. Near the bridge is a wharf where a small tugboat may be chartered for summer trips upriver to the LOWER FALLS OF THE TAHQUAMENON RIVER (*lv.* 11 A.M. *ret.* 6 P.M.; \$2). Wind-ing up the river in its 18-mile course, the chugging boat startles wild animals and birds feeding along the quiet banks. The Lower Falls, in three steps with a total drop of 43 feet, are considered by some to be more lovely than the Upper Falls, six miles above (*see Tour 18a*).

At 23 *m.* is a junction with an earth road.

Left on this road, recently constructed by CCC workers, to the LOWER FALLS OF THE TAHQUAMENON, 12 *m.* The road does not yet extend to the Upper Falls (*see Tour 18a*).

From the Lower Falls, the road leads northwest (R) to BETSY LAKE (*no accommodations; boats for rent*), deep in the woods.

SHELLDRAKE, 26.5 *m.* (25 pop.), is set between two branches of the Betsy River on Whitefish Bay. Today a resort and hunting community, Shelldrake in the early 1880's was an elaborately developed lumbering settlement. Here, in addition to the sawmill, were the houses of the workers, a hospital, a school house, and an icehouse, in which enough meat could be stored to last the population of 1,000 through winter. The dwellings were equipped with bathrooms, and all the buildings were plastered and piped for hot water supplied by the saw-dust burner. Few of the weather-stained buildings that once faced the long boardwalk remain.

There is a dwelling or two occupied by Indians, a general store operated during the summer months, and a hotel open the year around and used as a clubhouse by deer hunters during the season. The burner is standing, and remains of the powerhouse are visible. A railroad grade on which logs were delivered to the mill is a memento of other days. The small bay at the mouth of the river is partly closed by piling once used to keep the logs from drifting away. In winter, the village may be isolated for months at a time by the high drifts on the main road, but during the summer it has many visitors.

Beginning in the latter part of July and continuing until the first frosts of autumn, the thousands of acres of cut-over land surrounding the village produce heavy crops of blueberries. The harvest attracts not only the people of surrounding villages, but many itinerant families from the south.

WHITEFISH POINT POST OFFICE, 34.5 *m.*, was established in 1899 for the benefit of fishermen operating in Whitefish Bay. The bay was named for the large number of whitefish in its waters. The Ottawa

and Chippewa camped in peace on its shores in the early days, sharing the rich fishing ground without hostilities, because they knew there were fish enough for all. The shanties of the white fishermen who followed the Indians are scattered at intervals along the shore, although the main concentration of fishermen's homes stands within the shelter of Whitefish Point.

WHITEFISH POINT, 36.5 *m.*, extending into Lake Superior, has always meant shelter to the navigator steering for the Soo canal. The point breaks the force of the heavy seas raised by the long sweep of the wind down Lake Superior, and, in its lee, the waters of the bay remain comparatively calm. The first lighthouse, a brick tower erected in 1849, was replaced about 1900 by the present steel structure and supplemented by a lifeguard station. A radio beacon, one of several maintained by the Lighthouse Service on the Great Lakes, was recently installed in the lighthouse.

Tour 18B

Munising—Grand Island—Pictured Rocks—Sullivan's Landing; 30 *m.* by boat on Lake Superior.

Scheduled trips from Munising Municipal Merchandise Dock, foot of Elm Ave., to Grand Island, past Pictured Rocks, to Sullivan's Landing and return, July 1st to Labor Day, chartered trips out of season, weather permitting. Speedboat leaves 6 times daily on 90-minute round trip; fare, \$2. Grand Island Hotel Company's Diesel-powered *Ottawa* leaves Sundays and holidays only at 2 P.M. on 3-hour round trip; fare, \$1.50. Motorboat *Shamrock* leaves daily at 9:15 A.M. and 2:15 P.M. on 3-hour round trip; fare, \$2. Information bureaus on the dock and in the leading hotels at Munising. Boat trips along Pictured Rocks can also be made from Grand Marais (see Tour 18a).

The Pictured Rocks, a series of multicolored cliffs on the Lake Superior shore, have a maximum height of 200 feet, and overshadow the coastal waters for 27 miles, from South Bay, near Munising, to the neighborhood of the Grand Sable Banks (see *Grand Marais*, Tour 18a). The road called Pictured Rocks Trail leads only to one small section of the rocks, and does not present views comparable with those along the water route.

This extraordinary formation is composed of red Cambrian sandstone, interlaid with mineral oxides and other geological sediments that have hardened throughout the centuries into thin strata. The action of ice during the glacial periods, the wind, the sun, and the

driving rain, have carved spectacular patterns on the face of the cliffs, and these the soluble oxide deposits have stained with many hues. Weird and beautiful forms have been sculptured: soaring towers and domes, profiles, strangely human, and the prow of a gigantic ship. Numerous caverns, some with an area of five or six acres, have been cut into the cliffs by the ceaseless motion of the waves.

The splendor of these cliffs and the thunder of the waves in the caverns filled the Indians with awe; the Chippewa, who controlled most of the Upper Peninsula and camped here each summer, believed that the gods of thunder and lightning lurked in the resounding caverns. They believed that Paupukkeewis lived among the crags in the form of an eagle; and that many of the cliffs housed evil spirits that had to be propitiated at stated intervals. Hiawatha, their warrior-hero, hunted in these woods, stalked game along these cliffs, and waded past the palisades, indenting them frequently with his fist in its magic mitten.

Munising Bay, with its sandy shore and quiet waters, offered the best camp site in the district; it became virtually an Indian summer resort, where game was sought and crops planted. Here lived old Nakomis, Daughter of the Moon, who nursed young Hiawatha and instructed him in woodcraft, canoeing, and the movement of the stars. Here were held the annual water festivals, during which the tribesmen would sail in bark fleets past the Pictured Rocks and throw tobacco, food, and other gifts on the rocks as offerings to the gods. War dances, too, were held when great expeditions were to be dispatched against encroaching enemies.

White men first saw the Pictured Rocks when Pierre Radisson led an expedition along the southern shore in 1658. The noted French explorer wrote in his journal: 'These coasts are most delightful and wondrous . . . for Nature made it so pleasant to the eye, the spirit and the belly. At one point we came to a remarkable place. It is a bank of rocks that the wild men in our party made a sacrifice to; they call it Nanitoucksinagoit, which signifies the "likeness of the Devil." They sling much tobacco and other things on it in veneration . . . The rocks are so high and so steep it is impossible to climb up to the top . . . The main point is like a great Portal, by reason of the beating waves. The lower part of the opening is as big as a tower and grows bigger as it goes up. Inside the cavern there is, I believe, about six acres of space . . . a ship of 500 tons could pass by, so big is the arch . . . Along the shore there are many caves caused by the violence of the water . . . When the lake is agitated the waves go into these cavities with great force and make the most horrible noises, like the shooting of great guns . . .'

In 1668, Father Marquette came to the Ojibway camp and was followed in turn by traders and other missionaries, who regularly visited the region until the French relinquished the territory to the English. After the defeat of the British in the War of 1812, General Lewis Cass, accompanied by Henry Rowe Schoolcraft, noted student

of Indian life, explored the Upper Peninsula. From the works of Schoolcraft, Longfellow derived much of the material for *Hiawatha*.

On all excursion boats to the Pictured Rocks, guides call out the name of each cavern, cliff, or point, reciting its history and other information of interest. During calm weather, smaller boats enter the caves and crevices as the Indian canoes once did, but larger ones must stand offshore.

GRAND ISLAND (*tourist hotel, cabins*), 3.3 m. (L), with an area of 13,000 acres, is privately owned and sparsely settled, having less than 40 year-round inhabitants. The island, fourth largest in Michigan waters, has the contour of a huge mitten. Still in a wild state, it includes a private game sanctuary, where an attempt has been made to breed albino deer, and where a herd of elk, one of the few in Michigan, has its home. George Shiras III (b.1859), initiator of much legislation for the protection of wild animals and birds, made many of his extraordinary experiments with night photography of wild life on Grand Island. At Furnace Bay, along the southern shore, are the remains of an old American Fur Company trading post, where company agents traded with the Chippewa prior to the removal of the Indians in 1843. The fur derrick is intact. The oldest house on the island, built about 1810, a small frame cabin with a huge stone fireplace, is now a summer cottage.

SAND POINT (R), 3.7 m., extending well into the bay, marks the end of Munising harbor. Here a U. S. Coast Guard Station has been established in recent years. Sandstone formations appearing above the surface of the water mark the Pictured Rocks range.

MINER'S CASTLE, 7.5 m., rising like a feudal bastion 100 feet above the waves, is the major point of interest on the western wing of the rocks. The cliff is part of the Pictured Rocks State Park, which is reached by highway from Munising. On this cliff, it is said, Father Marquette preached to the Indians, who came from miles around and assembled in canoes below to hear the story of Christianity. In support of the legend is a huge, rugged cross carved in the face of the precipice; beside this is hollowed a large bowl, supposedly a receptacle for holy water. The Castle, best seen from the lake, is streaked with color. The base of the formation rests on a series of short, rough columns forming natural arches, under which small boats can pass when the water is calm. At the far side of the cliff, MINER'S RIVER enters the lake through a small delta. On quiet days, the roar of Miner's Falls, a short distance upstream, can plainly be heard at the Castle.

STATELY FALLS, 9 m., is the largest and most attractive of a series of cascades sweeping over the rocks in this section. Dropping 200 feet, the falls is spectacular in rainy weather, but reduced to a mere trickle in dry periods. The spray from the cascading waters whips over the face of the painted cliffs, heightening their colors. Near by, a Great Lakes freighter, the *Independence*, crashed against the rocks during a storm in 1852; part of the hull is visible through the water on clear days.

MOSQUITO HARBOR, 10.5 *m.*, is one of the few places along the Pictured Rocks where there is a sufficient gap in the sandstone cliffs to allow for a beach. Into the bay flows the MOSQUITO RIVER, a small stream well known along the coast for its brook and rainbow trout. In the spring, the river is the scene of heavy trout runs, as the rainbow start for the inland spawning beds.

COLORADO CAVES, 11.3 *m.*, noted for the vivid chromatic effects on their inner walls and façades, were regarded with great fear by the Indians of the surrounding country. The bright vermilion tints suggested fresh blood, and the natives believed the caverns to be places of torture and execution; they named them the 'caves of the bloody chiefs.'

LOVERS' LEAP, 11.7 *m.*, a 150-foot cliff, is associated with the familiar legend of a fair Indian maiden leaping to her death—usually because her lover failed to return with the victorious warriors. The rock is higher than are most of the thousands of 'lovers' leaps' in this and other States.

RAINBOW CAVE, 12 *m.*, is near the center of Pictured Rocks, where the coloration reaches its greatest intensity. On sunny days, the waters reflect the brilliant stones about the entrance, forming kaleidoscopic patterns of striking beauty.

GRAND PORTAL, 13.5 *m.*, discovered by Radisson in 1658, was once the most impressive feature along the rocky coast. A wide archway opened into a cavern five or six acres in extent. The prominence of this headland and the size of the opening made the portal seem like the gateway to all the caverns and underground spaces in the range. At a distance, the formation resembled a human face of threatening aspect. To the Indians it was Nanitoucksinagoit (likeness of the devil or evil spirit); but Pierre Radisson, scorning the term, named it St. Peter because his own 'name was so-called' and because he was the first Christian to see the promontory. According to the natives, many spirits and demigods lived in the cavern, including the 'Old Man of the Mountain' who gave shelter to Paupukkeewis, when that mischievous Indian was fleeing from his enemies. In the course of the great fight with Hiawatha, Paupukkeewis

Sped away in gust and whirlwind,
On the shores of Gitche-Gumee,
Westward by the Big-Sea-Water,
Came unto the rocky headlands,
To the Pictured Rocks of sandstone.

Weakened throughout the centuries by earth tremors, by erosion and breakers, a part of the roof collapsed in 1906, destroying Grand Portal and closing the great cavern. Today, the rocks and ledges above the old cave give shelter to thousands of sea gulls; so numerous are they in summer that their flights about the cliffs attract as much attention as do the multicolored rocks.

BATTLESHIP CAVE, 13.8 *m.*, large enough to admit small boats, is noted for the clearness of the water and the beautiful colored

pebbles and rocks on the floor of the lake, visible on fair days at a depth of 20 or 25 feet. BATTLESHIP ROCK, 13.9 *m.*, a white sandstone escarpment, resembles the prow of a man-of-war.

FLOWER VASE ROCK, 14.3 *m.*, is a chimney rock with verdant growth on the crest, as though the gigantic urn were actually in use. Within INDIAN DRUM CAVE, 14.6 *m.*, a U-shaped cavern extending far into the earth, breaking waves make a rolling thunder that can be heard for miles.

CHAPEL BEACH, 14.7 *m.*, three-fourths of a mile in length, is one of the largest beaches at the foot of the cliff. It is sandy and attractive, but, even in the warmest weather, the water is too cold for prolonged bathing.

CHAPEL ROCK, 15.5 *m.*, sometimes called Pulpit Rock, is one of the major attractions of the Pictured Rocks range. Roughly resembling a chapel, it stands above the water line and is approached by a long series of natural stone steps. The 'painted' cavern within, accommodating several hundred people, is entered through an arch, supported by huge pillars that are crowned by roughly shaped capitals. It is a natural auditorium, with high, vaulted ceiling, perpendicular walls, and a moderately level floor; at the rear is a small stone formation resembling an altar. The small CAVE WITH THE IRON RING, 15.7 *m.*, has a forbidding and mysterious aspect.

ADAIR PROMONTORY, 15.8 *m.*, a precipitous headland, was the scene of a dramatic rescue in the days before tourist excursions became popular along the rocky shore line. While fishing in the district, a man named Adair was caught in a gale and dashed violently ashore in his craft. The boat was demolished, and the man, suffering only minor injuries, was driven by the water against the rocks. Grasping one of the sharp ledges above his head, he clung to it for three days before a searching party found him.

SPRAY CREEK CASCADE, 16.6 *m.*, flowing over a sheer 100-foot cliff, is probably the most beautiful single feature of the range. After spring thaws and in rainy seasons, the water falls in a funnel-like stream. In dry weather, it dwindles to a needle jet that breaks into spray, giving rise, on sunny days, to a series of rainbows, as varied and beautiful as the rocky mural behind them. On the rocks below the cascade occurred the greatest marine disaster on the Pictured Rocks shore line. In 1850, the vessel *Superior*, with 250 persons aboard, was hurled against the cliffs during a violent storm. The ship was smashed to matchwood, and all but seven of the passengers and crew perished.

From Spray Creek eastward, the shore line is less irregular, but the colored cliffs continue to rise in sheer façades. There are occasional beaches, wherever a gap appears in the range, or the rocks veer back from the water.

BEAVER BEACH, 20 *m.*, about three-fourths of a mile long, is at the mouth of a creek that drains beautiful Beaver Lake, one of the most inaccessible spots in the Upper Peninsula. Bordering the beach

is the CUSINO STATE GAME REFUGE, in which are the Beaver Lake Deeryards.

At SEVEN MILE BEACH, 25.7 *m.*, named for its distance from the eastern extremity of Pictured Rocks, bathing is possible, although the water is usually very cold.

SULLIVAN'S LANDING, 30 *m.*, marks the end of the Pictured Rocks range and the beginning of the Grand Sable Banks (*see Tour 18a*). The beach, about a mile in length, is a popular outing point.

Tour 19

Negaunee—Gladstone—Escanaba—Menominee—(Marinette, Wis.); State 35.

Negaunee to Wisconsin State Line, 128 *m.*

Roadbed hard-surfaced or graveled throughout; two lanes, closed only after heavy snows.

Chicago and North Western Ry. parallels route between Negaunee and Escanaba. Tourist accommodations in most communities.

The quiet villages on State 35 are for the most part old mining or lumbering camps that now serve as fishing or farming centers. Dense forests of cedar, birch, and poplar and groves of large pines, beeches, and elms alternate with areas of poor, stony soil and blueberry plains. Fishing is good in the many streams and, because the road is not heavily traveled, wild life is fairly easy to observe.

Section a. NEGAUNEE to ESCANABA; 73.5 m. State 35.

NEGAUNEE (Ind., pioneer, or the first), 0 *m.* (1,564 alt., 6,552 pop.), the first mining city on the Marquette Range, came into being after the fortuitous discovery of iron ore on the site, in 1844, by a surveying party. A group of explorers from Jackson, coming here to mine copper, silver, and gold in the Keweenaw Peninsula, was guided to the Negaunee ore beds in 1845 by an Indian chief from the Keweenaw country.

At Jackson Hill, where iron was first discovered, erosion had so thoroughly scoured away the coating of soil that the ore could be pried loose with picks. It was then broken up with sledges and moved to the stock piles in horsecars. But the mine remained for years a crude quarry, because rough forest trails were the only means of communica-

tion with the outside world, and only in winter could the stock piles be transported to Marquette on sleds. Little more than a thousand tons could be moved during any one season; then at Marquette the ore had to be loaded by hand on sailing vessels, to be unloaded at Sault Ste. Marie, carried around the rapids, and reloaded for the final trip down the lakes. Under such adverse conditions, it is small wonder that, in the nine years following the settlement of Negaunee, only six cabins were put up, to house the few miners who pecked away at Jackson Hill with picks and iron bars.

Forges were established at Negaunee in 1848, and others soon followed at Marquette and elsewhere in the vicinity. The crude charcoal method of smelting accentuated the need, not only for more efficient smelting processes, but for a railroad to handle freight over the 13-mile stretch down the rugged Lake Superior escarpment to Marquette. The mining companies, unsuccessful in their attempts to secure a line, started construction of a plank road from Ishpeming through Negaunee to Marquette. The road was completed in 1855 as a tramway, with wooden rails protected by strips of iron, over which mule carts could haul a four-ton load daily. During this same year, the first locks at the Soo were opened, and the problem of transporting ore to the industrial centers on the lower lakes was solved.

A railroad connecting Negaunee and Marquette was finished in 1857, and production increased from 1,000 tons annually in the 1840's to 135,000 tons in 1871. The city, platted in 1865, expanded somewhat when furnace operators learned to smelt soft ores in 1870, and a new mine, the New York Hematite, was opened in Negaunee. Shaft mining was started in the 1880's. In 1910 the production from the Negaunee mines increased to 1,800,000 tons, and the city's population was 8,460. Although the industry has fluctuated since then, the production of iron ore is still the major industry of Negaunee.

On Iron St. in the western section of the city is the JACKSON MONUMENT, a 12-foot pyramid of iron-ore blocks, erected by the Jackson Iron Company in 1904 to mark the first discovery of iron ore in the Lake Superior region. An inscription on the monument places the exact spot 300 feet northeast.

Negaunee is at a junction with State 28 (*see Tour 18a*).

PALMER, 5 m. (650 pop.), with its charming little waterfall on the west side of the highway, is in a hill-locked valley that has been the scene of iron-ore mining since 1864. But one mine is now operating, and that only at intervals.

At 18.5 m. is a junction with an earth road (County 557).

Right on this road to a junction with the Anderson Camp Ground Road, a sand trail, at 7 m.; R. here to the ANDERSON LAKE CAMP GROUNDS (*tables, stoves, camp sites*), 7.5 m., in the heart of the Escanaba River State Game Refuge. The lake, far removed from the beaten trail, is an ideal place for the nature lover and the tourist in search of quiet.

Within the game refuge is CHANDLER BROOK DEERYARD (*guide necessary*), where, during severe weather, some 2,000 deer find food and shelter. In milder weather, the deer browse in the surrounding uplands. Destruction of many

Upper Peninsula yarding areas by logging has reduced the amount of winter food available, while enforcement of game laws has aided the deer to multiply, with the inevitable result that many animals die of starvation during severe winters. Supplementary food only attracts greater numbers to already impoverished areas, and the problem of their subsistence, as well as their ultimate survival, is inadequately solved by such emergency measures. In 1939, the department of conservation attempted to institute the shooting of does, as well as bucks, in areas where the animals are too numerous for the browse available. The plan was defeated in the legislature.

PRINCETON, 20 *m.* (600 pop.), in the midst of level plains that yield heavy blueberry crops, was a flourishing village of the Swanzy mining district, until a large number of its residents moved to Gwinn, a model village two miles southeast. The Princeton Mine, between 1891 and 1929, shipped 2,242,842 tons of iron ore. The now idle mine has not been abandoned, as a considerable reserve tonnage has been developed.

GWINN, 22 *m.* (1,300 pop.), is a model community built in 1907 by the Cleveland Cliffs Iron Company for its employees. Situated on the East Branch of the Escanaba River, it is known for its cleanliness and excellent planning. Lots and houses were sold to the employees at cost, and the company has erected a hospital, a clubhouse, and other public buildings.

Left (south) from Gwinn on a cinder road to GWINN COUNTY PARK (*camping, picnicking, bathing*), 0.5 *m.* (L). The park is on the Escanaba River, a popular fishing stream.

Today most of the villages along this section of the route are small and quiet, but during the late nineteenth century they were thriving communities, whose inhabitants found employment in planing and shingle mills and at charcoal kilns, long since shut down. Typical of these places are LITTLE LAKE (also known as Forsyth), 27.5 *m.* (150 pop.), McFARLAND, 36.5 *m.* (400 pop.), and LATHROP, 39 *m.* (150 pop.).

ROCK, 45 *m.* (300 pop.), a neat little village, was a stop on the Marquette stagecoach route until 1865, when the Chicago & Northwestern Railway began operations. The first permanent settlers came about 1864 to cut maple forests for the charcoal kilns. When the panic of 1873 closed most of the ovens, the inhabitants were able to turn to farming and large-scale poultry raising. In recent years, lumbering has regained importance, and several camps have been established near by. In Rock are three co-operative enterprises—a store, a garage, and a fire insurance company. Finnish people are in the majority, and Finnish Hall is headquarters for their festivities on May Day (May 1) and Midsummer Day (June 24).

Southward are other small settlements—TROMBLEY, 47 *m.* (50 pop.); PERKINS, 54 *m.* (400 pop.); and BRAMPTON, 57 *m.* (145 pop.), on Day's River, a trout stream. The villagers market vegetables, berries, and dairy products for the resort trade.

GLADSTONE, 65 *m.* (612 alt., 5,170 pop.) (*see Tour 16b*), is at a junction with US 2 (US 41) (*see Tour 16b*), with which State 35 is united for 8.5 miles to the outskirts of ESCANABA, 73.5 *m.* (612 alt., 14,524 pop.) (*see Tour 16b*).

Section b. ESCANABA to WISCONSIN LINE; 54.5 m. State 35.

South of ESCANABA, 0 *m.*, State 35 follows the shore of Green Bay past fishing villages and resort centers. WEISSERT'S ANIMAL CAMP (L), 5 *m.*, on a sweeping curve of the roadway, displays Michigan animals captured by Mrs. Leslie Farrell. Mrs. Farrell, who began trapping when she was 12 years old, has uncommon understanding of wild life, gained from long association with it and from innumerable forest trips, often made in the company of Indians.

FORD RIVER, 8 *m.* (54 pop.), on Green Bay, was for a time an important lumber-manufacturing village of more than 1,000 population. There were seven docks, and the Ford River sawmills had an annual output of 50,000,000 feet of lumber. Now the docks are rotting, and the bay channels are filled with sand.

FOX, 17 *m.* (93 pop.), a former lumbering center, is now indistinguishable from the other resort communities on Green Bay.

CEDAR RIVER, 30 *m.* (88 pop.), settled in 1854 at the mouth of the Big Cedar River, is a gathering place for sportsmen who troll for lake trout on Green Bay, near the outlet of the river, or go upstream for black bass, northern pike, perch, and bluegills. Deer and duck hunting are good along the course of this stream. The village is known for its large number of weeping willows, uncommon in the Upper Peninsula.

As the highway passes through WELLS STATE PARK (*camping, playgrounds*), 32 *m.*, it is lined with fine, straight trees, including some large beeches. The park is in the Cedar River Game Area administered by the State department of conservation. At the south end, careful landscaping allows a splendid view of Green Bay.

The DOMINICAN COLLEGE CAMP (L), 36 *m.*, is a summer camp and school for theological students from the Dominican House of Studies at River Forest, Illinois. Bordering a little stream among the cedars are the buildings, of upright split posts made from trees felled in clearing the grounds. The students, by whose labor the camp was developed, each summer make improvements on the buildings and grounds, interspersing labor and learning with periods of recreation on the camp's property, which extends to the bay shore. Here a cedar tower, surmounted by a cross, has been erected.

In the early days of white settlement, Indians came in their canoes during late summer to pick, for sale in Menominee, the blueberries and blackberries that grew in the Cedar River area. According to an aged Michigan Chippewa, these birch canoes were cranky and unseaworthy; they 'wore out all to hell too soon,' and, whenever the tribesmen really wanted to go somewhere without delay, someone in-

variably put his foot through the bottom of the craft—an opinion somewhat at variance with the Hiawatha legend of Indian dexterity.

THE MENOMINEE COUNTY MEMORIAL PARK (*camping*), 38 *m.* (L), occupies an attractive site along the bay shore. At 53 *m.* is a junction with US 41, which leads north to Spalding (*see Tour 16b*), 40 *m.*

MENOMINEE (Ind., wild rice country), 54 *m.* (600 alt., 10,320 pop.), triangular in layout, is bordered on the east by Green Bay and on the south and west by the Menominee River. To these waters it owes much of its livelihood and recreation. Hydroelectric power from the Menominee and low rates of water transportation have attracted numerous manufacturers to the city.

The first settler in the Menominee district was Louis Chappée, a fur trader who built a post on the river in 1796. Following the fur traders came lumber operators who built a sawmill and dam in 1832. Construction of the dam revealed other possibilities: fish were so numerous that dip nets were used, and more than 500 barrels of fish were scooped up, salted, and packed each season. Menominee was the largest lumber-shipping point in the Upper Peninsula until the supply of timber was exhausted in 1910, when other sources of revenue were developed, among them dairying. Menominee County produces 2,000,000 pounds of cheese annually; its commercial fishing yields an annual return of \$250,000.

The harbor, extending one mile upstream from the river's mouth, has a dredged channel its entire length. Here ships unload raw material for factories and take on cargoes of finished products—paper, baby buggies, chrome furniture, Venetian blinds, electric fans, and fresh fish. Along the Green Bay waterfront are numerous parks and beaches. The MUNICIPAL BEACH, Sheridan Road at Ogden Ave., is one block from the main business street, which parallels the shore. A large recreation room, facing the bay, overlooks the breakwater extending from the beach eastward into the bay for 300 feet, then running south 900 feet to form a yacht basin that can accommodate the largest pleasure craft on the Great Lakes. This breakwater is a favorite strolling place. Fishermen crowd its railings, yachtsmen in marine garb give it a holiday atmosphere, and at night, when its lights are reflected in the dark water, it is a festive and romantic promenade.

During the vacation season, thousands of visitors watch weekly sailboat races, an annual regatta held the last week in July, and various swimming contests. But the summer sports are mild compared with the revelry of the annual Smelt Carnival on the river (*usually in April*). Originating from a spontaneous yearly gathering of fishermen, the Smelt Carnival was inaugurated in 1936 as a city-sponsored event. The program includes the coronation of a king and queen on a throne in the center of the Interstate Bridge (*closed to traffic during the Carnival*), fireworks, huge bonfires, dancing, singing, and music. Because only half the bridge is within its limits, Michigan does not enforce its size limit for nets. This lenient attitude has given impetus to a mass-production smelt-dipping technique. Menominee fishermen, using elab-

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orate rigs made with a pulley apparatus on the pointed ends of two long poles, fastened together and connected to the bridge siding, are able to raise and lower nets 10 to 12 feet wide. In 1934, two fishermen lifted 4,200 pounds of smelt in less than five hours; more than 1,000 tons were taken from the Menominee River during the 1938 season. Festivities are illuminated at night by fires made from discarded automobile tires, gathered by the theaters of the Twin Cities at 'tire matinées' for children; the price of admission to the show is one old tire.

JOHN HENES CITY PARK (*picnicking, bathing, recreation, no camping allowed*), with 59 acres of natural forest, at the east end of Grand Blvd., was presented to the city by John Henes in 1905. Near by are the dunes from which sand was taken to fill in the slough beneath the Interstate Bridge, where in early days the Indians harvested wild rice.

The rice country was the scene of the Sturgeon War, fought between the Menominee and the Chippewa. Sturgeon was their chief food, and, when the Menominee dammed the river to prevent the fish from reaching the Chippewa settlement, a war resulted in which hundreds of Menominee were killed. Their burial place is called BURYING GROUND POINT, marked by a bronze tablet in a large boulder at WEST END PARK, Ogden Ave. and Bridge St., three blocks west of the Interstate Bridge.

JORDAN COLLEGE, at State Road and Stephenson Ave., with white brick buildings and a 100-acre campus covered with indigenous trees, was established in 1932 and named for the Very Reverend Father Francis of the Cross of Jordan, founder of the Society of the Divine Savior. Jordan, a liberal arts college, stands on the site of one of the earliest log schools in this territory.

At the extreme southern tip of the city, at the mouth of the Menominee River, are the Ann Arbor Railroad's AUTO FERRY DOCKS (*one boat daily to and from Frankfort; lv. Menominee 2 P.M.; car, \$4.50; passengers, deck passage, \$2.75; cabin accommodations, \$1.50 extra; stateroom, \$3 extra*).

A large and inviting TOURIST LODGE AND INFORMATION BUREAU (Ogden Ave. at the Interstate Bridge approach) built of hand-hewn logs and maintained by the State Highway Department, offers highway and vacation information and a comfortable lounge.

State 35 (US 41) crosses the Menominee River here. The WISCONSIN LINE, 54.5 m., is on the INTERSTATE BRIDGE, a simply designed, 3,825-foot link between Menominee and Marinette, Wisconsin

Tour 20

Copper Harbor—Calumet—Houghton—Bruce Crossing—Watersmeet (Land O'Lakes, Wis.); State 26, US 45.
Copper Harbor to Wisconsin Line, 138 m.

Roadbed improved stone and gravel except for 48 miles of hard-surfacing; two lanes, closed only by heavy snows.

Copper Range R.R. and Duluth, South Shore and Atlantic Ry. parallel route between Hancock and Calumet; Copper Range R.R. between Houghton and McKeever.

Hotels and tourist accommodations in cities; camp sites and cabins along highway.

State 26 passes the copper mines, the villages, and the single city, Hancock, of Michigan's most northerly arm—the Keweenaw Peninsula. Portage Lake and the Government canal divide the peninsula, making an island of the upper half. State 26 continues southwestward to the junction, near Rockland, with US 45, over which the route follows directly south through a country of timber and streams to the Wisconsin border.

The Keweenaw Peninsula, often called the 'Treasure Chest of Michigan,' but more commonly known as the Copper Country, has produced, to date, about eight-and-a-half billion pounds of copper. The copper abounds as pure metal in certain porous members of a series of northward tilted ancient lava flows and conglomerates. The ore bodies, which extend for thousands of feet horizontally, and have been mined to depths of more than a mile vertically, dip downward to the north under Lake Superior and emerge again on Isle Royale (*see Isle Royale*) and on the north shore of Lake Superior.

Thousands of years before the arrival of the white race, the North American aborigines had worked extensively the surface deposits throughout the region. From the old Indian pits—some mere holes, others open mines 500 feet long—that scar the terrain north of Mass, tons of pure copper and some silver were laboriously extracted by the primitive fire-and-water and stone-hammer method. Who these aboriginal miners were, or when their major operations were carried on, are questions that have not been satisfactorily answered. One school maintains that the work was done by American Indians who, in all probability, used the metal for trading purposes, as they were unskilled in the art of metal working; a few tons would have supplied their needs for thousands of years. Another opinion is that the Vikings of the tenth and eleventh centuries made occasional expeditions to the Great Lakes for cargoes of copper, a view that is not in harmony with the

fact that the mining was done by late Stone Age methods, whereas the Vikings lived in an iron age. Still another group believes that the Aztecs of Mexico sent summer mining expeditions up the Mississippi to the Lakes region, over a period of several decades or possibly centuries. Some archaeologists and anthropologists are convinced that the Phoenicians, noted for their trade in bronzeware, worked the mines 20 centuries before the Christian era.

The interest of the white race was first drawn to the region in 1636, when a certain Monsieur Legarde published in Paris a pamphlet, based on reports by Champlain, extravagantly describing the region as rich not only in copper deposits, but also in other valuable minerals and precious stones. In 1666, Father Claude Allouez wrote of the specimens of pure copper he found along Keweenaw Bay. About a century later Captain Jonathan Carver, a Londoner, stated, in a book similar to Legarde's pamphlet, though more restrained, that native copper was plentiful in the major ore lodes, and masses of the pure metal might be picked up throughout the district wherever the deposits came to the surface. This enthusiastic work inspired Alexander Henry, an adventurous young Englishman, to lead an expedition to the region in 1765, in search of a fortune in copper. Henry explored the country from Copper Harbor and Eagle River westward to the Ontonagon River, where he opened a crude mine. But lack of mining equipment and geological data forced him to sail home empty-handed.

In the decade following a survey made (1840-43) by Dr. Douglass Houghton, first State geologist, nearly a thousand claims were filed in the Lake Superior district, and other thousands of localities were prospected. While some mines were valueless, others proved fabulously rich. Not a few have continued to produce heavily. Among the largest, oldest, and most productive are the Quincy Mine at Hancock and the Calumet and Hecla, at Calumet, the latter having paid approximately \$200,000,000 in dividends.

Annual production in the Copper Country reached a peak of nearly 270,000,000 pounds of refined copper in 1916 and 1917. After the World War, a series of adverse conditions struck the district simultaneously: prices slumped, immense stocks of copper accumulated, and high-grade copper ore was discovered elsewhere in this country and abroad. A tariff on copper imports, protecting domestic producers from foreign competition, has not neutralized the effects of adverse factors—the increasing depths of mines, the low grade of remaining ore, and the exhaustion of deposits. Upon the collapse of the stock market in 1929, large companies as well as small closed their shafts, and 85 per cent of the population of Keweenaw County went on Government relief. Economic conditions brightened somewhat in the 1930's with the expansion of the tourist trade and the reopening of some mines. By mining the highest grade portions of the known ore reserves—which even so are the lowest grade ores ever mined in the Copper Country—copper production in the district reached 75,000,000 pounds in 1937. Richer mines may be opened sometime in the future, as less than 10

per cent of the probable copper-bearing range has ever been explored.

COPPER HARBOR, 0 m. (16 pop.), formerly the chief port of entry to the Copper Country, is a small summer resort of great beauty, the northernmost village in the State. Lumps of pure copper exposed along the bay attracted the attention of explorers, and, when the Indians' surrendered title to the territory, more than a dozen copper locations were soon developed on the slope above the village. The shutting of the mines, when operations proved unprofitable because of thin and scattered deposits, the closing of neighboring Fort Wilkins, and the construction of railroads into the peninsula robbed Copper Harbor of its commerce and other sources of revenue. The village's swift decline, halted for a short time in the 1890's by white-pine lumbering, continued until the port was little more than a fishing outpost. But for its rediscovery in modern times by tourists, the place might have become a ghost settlement. A local resort is open in winter for snow and ice sports and throughout the summer season.

Regular passenger service between Isle Royale (*see Isle Royale*) and Copper Harbor was inaugurated in the late 1930's (*cruiser Isle Royale Queen leaves Copper Harbor 8 A.M., returns 7 P.M., Mon., Tues., Thurs., and Fri. in July and Aug.; fare, \$5 round trip*).

1. Left (east) from Copper Harbor on US 41 to old FORT WILKINS, 1.5 m., a historic army post on Lake Fanny Hooe, established in 1844, that has been converted into a State park (*camping facilities, fishing in Lake Fanny Hooe*). At the outbreak of the Mexican War, the fort was abandoned and was not reoccupied until after the Civil War (1867), when it was used in part for hospitalization of wounded Union veterans. In 1870, the garrison was withdrawn and Fort Wilkins was advertised for sale. When no buyers appeared, the Government continued for a number of years to use the post as a home for disabled soldiers. The fort and contiguous Federal lands were bought by Houghton and Keweenaw Counties in 1921 and turned over to the State for memorial and recreational purposes. The stockade has been restored, and the buildings have been repaired and painted to preserve the architectural and military atmosphere of the old frontier post.

2. Left from Copper Harbor on a side road (*inquire locally*) to OLD CLARK MILL (L), 1 m., where burned timbers mark the trestle and framework of an abandoned copper stamping plant. At 3.5 m. on this road are the RUINS of a MANGANESE MINE (L), a venture little known outside the Copper Harbor district. The shaft was sunk in the search for copper, but manganese, used in making alloys, was discovered and worked.

3. Left (*south*) on US 41, an alternate route with State 26 between Copper Harbor and Phoenix (*see below*), to KEWEENAW PARK COTTAGES (*moderate charge*) and GOLF COURSE (*greens fees: 18 holes, or all day, \$1; 9 holes, 75¢; free to cottage guests*), 1.5 m., the newest and most elaborate golfing and recreation center in the Copper Country (*open June 15-Sept. 15*). Begun by the CWA and finished by the WPA in 1936, the course, which lies on a tableland above Lake Superior, was hacked out of a wilderness, the work giving employment to several hundred men over a period of two-and-one-half years. It is estimated that 187,000 trees ranging from small saplings to large marketable conifers were cut by the workers in clearing the land. The logs and poles were used in building a large and attractive clubhouse and a dozen cottages; the limbs, tops, and stumps were made into firewood to supply the needs of approximately 1,000 families in the district. The golf course, though smooth and

beautifully landscaped, is one of the most difficult in the State, challenging the skill of leading professionals and amateurs. Near the clubhouse are a number of concrete shuffleboards (*free*) and modern tennis courts (25¢ *an hour*); through the woods and along the lake shore is a network of hiking trails.

The popularity of the Keweenaw Park Development presented a series of problems to the Keweenaw County Board of Supervisors during their 1938 meetings. Bears from the wild and heavily forested peninsula were attracted in large numbers to a garbage pit across the road from the Keweenaw Park course. The supervisors were afraid that tourists might attempt to be friendly with the animals and be attacked, for Keweenaw bears, when provoked, are dangerous adversaries. Faced with this problem—protecting the people from the bears—the supervisors ordered danger warnings posted, and the season passed without difficulty. Later in the fall, however, as the hunting season approached, fears were felt that deer hunters, permitted by law to shoot one bear, would annihilate the entire bear population of the county, when the animals came down to the park to feed. This problem—protecting the bears from the people—was solved when the State department of conservation enacted a closed season on bear in the Keweenaw district as an emergency measure.

LAKE MEDORA (*bathing, boating, fishing, picnicking*), 4.5 m. (R), 650 acres in area, is partly developed as a resort colony. MANDAN, 7.4 m., is a closed mine and deserted company village near Clear Lake, where a score of empty houses (*available to tourists*) are guarded by a caretaker. The village is a delightful stopover for travelers. Through the maple forests, marked by ruins of old mines, are numerous wooded roads and trails that make excellent hiking routes.

At 11.4 m. on US 41 is a junction with a county road.

Right on this road 0.3 m. to WYOMING, an abandoned village on the site of a stamping mill and the old Wyoming Mine. During the 1870's and 1880's, Wyoming, with four saloons, was better known to the miners as 'Helltown.' Ahead on the county road, 4.8 m. from US 41, at the point where Lac La Belle first becomes visible (R), is a junction; R. here 0.5 m. is the village of LAC LA BELLE, now without permanent residents but once an important shipping point. The lake of the same name, connected with Lake Superior by a channel, is fully protected from north and west winds and, at one time, was used as a refuge by Great Lakes craft caught in heavy storms. It is now a small summer resort, with boats and cabins for rent during the season. At the end of the main county road, overlooking the waters of Bête Grise Bay, is BÊTE GRISE (Fr., grey beast), 7.8 m. from US 41 (10 pop.), an important village in mining days that has been almost abandoned.

The history of DELAWARE, 12 m. on US 41 (8 pop.), a village of abandoned red buildings, is a long record of unsuccessful attempts to develop a copper mine. Horace Greeley is reputed to have visited the place in 1856 and to have assisted in the management of the property.

At 18 m. is the western junction of US 41 and State 26 (*see below*).

West of Copper Harbor, State 26 follows the northwestern rim of the peninsula. At 0.4 m. is a junction with the BROCKWAY MOUNTAIN DRIVE, one of the most spectacular drives in the peninsula, with steep mountain grades and an average elevation of 700 feet above Lake Superior.

Left from its junction with State 26, the Drive takes a twisting upward course, climbing to the rim of a small plateau at 0.5 m. that offers a view of Copper Harbor far below, nestling between Lake Fanny Hooe and the great expanse of Lake Superior. At some points the road passes within a few feet of precipitous cliffs, but concrete barricades have been erected to prevent accidents. Along this roadway, 47 varieties of trees and more than 700 flowers have been identified by botanists. BROCKWAY'S KNOLL (1,337 alt.), 4 m. (L), is one of

the higher peaks overlooking the Keweenaw Peninsula. The Drive continues over rolling, tree-covered hills, rejoining State 26 at 9 *m.* (*see below*).

On State 26, at 2 *m.*, is the DEVIL'S WASHTUB (R), a cool, dark recess at the water's edge, into which, when the water is high, the waves rush swirling and pounding. A rough hole in the rocky roof lets in a narrow shaft of light. In many places throughout this section of the Lake Superior coast, the surface rock is predominantly conglomerate. The red sandstone formation, with small, smooth, red pebbles embedded in it, looks like a great mass of peanut brittle.

HEBARD PARK (*stoves, tables*), 3 *m.* (R), was opened in 1937. A few yards offshore is a small island of conglomerate rock, connected with the mainland by a footbridge and a hand-operated ferry.

At AGATE HARBOR, 7 *m.*, a summer cottage settlement on Lake Superior, the beaches and cliffs are scattered with glazed, varicolored agate stones. Since the days of the explorers, the gathering of agates along the beach has been a popular pursuit; large specimen slabs, such as the one that was polished and sent to the Paris Exposition, have been taken from a reef in the harbor.

ESREY PARK (*camping, picnicking, playground*), 9 *m.*, is at the edge of the foothills. Stone steps lead up a ledge to a bluff that overlooks the shore of Lake Superior and the surrounding countryside. At 10 *m.* is the junction with the western end of the Brockway Mountain Drive (*see above*).

LAKE BAILEY (L), 10.5 *m.*, a popular summer-outing site, reflects in its quiet waters the image of the high, wooded hills that hem it in on all sides.

EAGLE HARBOR, 14 *m.* (75 pop.), is a resort village on Lake Superior with a number of old wharfs from which, in the past, raw copper by the millions of pounds was shipped to the world's markets. In a local school house, the rituals for the Order of Knights of Pythias (which was later founded in Washington, D. C.) were written by Justus H. Rathbone, a school teacher, between 1858-61. The idea for the order developed during long winters on the Superior shore, when, to pass away idle hours, the teacher presented theatricals in the school building, among them a dramatization of the friendship between Damon and Pythias. The tiny school where Rathbone taught, in the northeastern section of the village, has been preserved as a KNIGHTS OF PYTHIAS SHRINE.

The village harbor, enclosed by two long headlands, has been improved by the Government; on the west side is a modern lighthouse and fog signal. Beyond the shipping district is EAGLE HARBOR BEACH. Passenger service was established between Eagle Harbor and Isle Royale (*see Isle Royale*) in 1937 (*cabin cruiser Ah-wa-nesha leaves Eagle Harbor 1 P.M. E.S.T. Mon., Wed., Fri., June 1-Sept. 15; 30-hour trip; round trip fare, \$5 to Chippewa Harbor, Rock Harbor, and Tobins Harbor; \$10 round trip to Washington Harbor and Belle Isle*).

Right (*south*) from Eagle Harbor to the DUNES DRIVE, a shore-line stretch of road, built in 1937-8 by Keweenaw County, along Lake Superior between

Eagle Harbor and Eagle River, 8 *m.* (*see below*). Because of the high water level of Lake Superior in those two years, parts of the road were washed out, and it was necessary to reroute the course along higher ground.

At 15 *m.* is a junction with County 586.

Left on this road to the junction with a trail, 1 *m.*, which leads L. 500 yards to LOOKOUT POINT (1,330 alt.), a peak on the peninsula range that affords a view of both shores.

COPPER FALLS MINE, 16 *m.* (8 pop.), is an abandoned mining location that was extensively worked by prehistoric men. From a large open pit in the vein, the aborigines apparently took tons of pure copper. White men were attracted to the district in 1845, when copper was found in a near-by creek where a waterfall had cut through the vein. When a lump of pure metal weighing about seven tons was uncovered, several companies hastened to open mines; but only thin deposits were found, and the last firm to work the lode closed in 1898. Thereafter many of the houses, including the school house, were razed by people from Eagle Harbor, who used the material for construction purposes in their village. Today, the site of Copper Falls Mine has been taken over by summer colonists who have built cottages along Copper Falls Creek.

At 20.8 *m.* is the western junction with US 41 (*see above*), an alternate route with State 26 between this point and Copper Harbor.

PHOENIX, 22.5 *m.* (50 pop.), was originally a rich copper and silver location developed around a series of old Indian pits. One deposit in a drift under Eagle River yielded 18,000 pounds; a mass of copper found in a fissure adit, or slanting shaft, scaled approximately 200 tons. Throughout the various lodes, numerous bulks of native silver were also uncovered, but these were mere particles in comparison with the great copper masses. The largest of the silver nuggets (troy weight, 8¾ pounds) was shipped to the Philadelphia Mint, where it was put on exhibition and may be seen today. The mine, the second in Keweenaw County, opened in 1845 and continued operations until 1905. Except for one dividend of \$20,000 paid in 1877, the mine proved unsuccessful. For almost two decades, it was closed because of conditions in the copper and silver market. In 1928, the powerful Calumet and Hecla interests took an option on the old location, drained the mine, which had been flooded, and began an exhaustive inspection of the property. After a report had been made, a small crew was put to work and kept busy at exploration until the spring of 1936, when the men were discharged and the mine closed indefinitely.

Right from Phoenix on State 6 is another historic shore site—EAGLE RIVER, 2.5 *m.* (81 pop.). Ten claims filed on copper deposits in the Eagle River district when the Indian title to the land was purchased, proved, with few exceptions, valueless or unprofitable and were soon abandoned. The village, continuing to serve as a shipping and distribution point eventually became the seat of Keweenaw County. Most of the buildings of the mining era, including the old light-house, have been remodeled and converted into summer homes and cottages.

In normal years, Eagle River has a long, sandy stretch of beach, but, when the Lake Superior water level is above the average, as was the case in 1938, the water line extends 50 or 60 feet inland, washing away the sand and leaving the shore covered with smooth red sandstone pebbles and stones. Northeastward along the shore is DUNES DRIVE, which borders the water for eight miles to Eagle Harbor (*see above*).

The EAGLE RIVER FUSE COMPANY PLANT, established in 1862, makes blasting fuse by a secret formula, at the rate of 25,000 feet a day.

In Eagle River stands the DOUGLASS HOUGHTON MONUMENT, honoring the first State geologist, whose reports brought scores of prospectors to the Copper Country in the 1840's. Houghton drowned in Lake Superior off Eagle River in 1845. The monument is built of specimens of the principal rock and ore types from the various copper- and iron-producing areas of the Upper Peninsula. It is capped with a large boulder from the bed of Eagle River.

On the eastern edge of the village is a MUNICIPAL TOURIST CAMP (*camp plots, stoves, tables*). In the hills overlooking the lake is CAMP GITCHEE GUMEE, a young people's encampment maintained by the Northern Baptist Convention. Each year, during July and August, a six-week Bible Conference is held in the tabernacle, a large building standing in a grove of white birch.

At 24 *m.* on State 26 is a junction with an earth road.

Right on this road to CLIFF, 1 *m.*, an abandoned village marking the site of the old Cliff Mine, discovered in 1845. About 70 per cent of the mine's output in a half century of operation was mass native copper, much native silver was also found. The development paid a dividend of \$60,000 as early as 1849, the first large sum distributed in North America on a copper investment. As the mine went deeper, it became less productive; by the beginning of the twentieth century it was operating at a loss and, in 1910, it was sold to the Calumet and Hecla interests. The mine has been closed since, except for a short period between 1926-8, when the old pit was drained for an examination by mineralogists.

A copper plaque on a roadside boulder, a MONUMENT TO THE DISCOVERER OF CLIFF LODE (R), tells the whole story, from the probably biased point of view of good Copper Country men. 'On November 18, 1844, on the bluff west of this point, named Cliff Mine, Pure Metallic Copper was first discovered in the world by "John Hays" of Pittsburgh, Pa. Erected by the Keweenaw Historical Society, July 31, 1930.' Authentic stories, such as that relating to the Ontonagon Boulder (*see Ontonagon, Tour 20B*), appear to have been ignored by the society.

MOHAWK, 30 *m.* (1,200 pop.), was formerly a prosperous mining center, settled in 1898 and locally noted for its production of a mineral, at that time, rare in metallurgy. This substance, a compound of copper and arsenic, which has the appearance of silver, was called mohawkite, for the mine and village. Because of the refractory nature of mohawkite, it could not be smelted in local furnaces, but had to be shipped first to English and later to New Jersey smelters that specialized in separating complex ores. The mine was active until 1934, when it closed permanently and sold all company dwellings to discharged employees.

AHMEEK (Ind., beaver), 32 *m.* (624 pop.), owes its growth and development to the AHMEEK MINE (*not open*), one of the few active copper mines in Keweenaw County. It has three inclined shafts, each more than a mile long, and employs about 700 men when operating at full capacity. To date it has produced more than 500,000,000 pounds of copper.

ALLOUEZ (Al-o-way), 33 *m.* (800 pop.), is another industrial village that grew up around a rich mining location. The place was named in honor of Father Claude Allouez, a Jesuit, the first white man to find copper on the Keweenaw Peninsula.

KEARSARGE, 34 *m.* (100 pop.), a modern mining community, was named for the U.S.S. *Kearsarge* by a former naval officer who became an employee of the Calumet and Hecla Consolidated Copper Company. The location, penetrating the master amygdaloid lode, was highly productive from the time of its discovery in 1882 until recently. Because of copper market conditions, the shaft was closed in 1930.

CALUMET (Ind., peace pipe), 36.5 *m.* (1,203 alt., 1,557 pop.), is the home of the extensive Calumet and Hecla Consolidated Copper Company interest. The old Calumet Mining Company saw its stock rise from \$1 to \$75 a share in 1865-6; and, since the consolidation of local mine interests under the Calumet and Hecla banner in 1871, the company has paid more than \$160,000,000 in dividends. In many ways, Calumet, despite its size and wealth, is a typical company village, of which there are a large number in the copper region. Many dwellings are owned and rented by Calumet and Hecla; schools, a public library, and a hospital for employees have been established, and a fire department and waterworks are maintained for the protection of company property.

Founded on a series of old Indian pits, Calumet owes its growth to the development of a central location, ultimately known as the CALUMET AND HECLA MINE (*not open*), which is equipped underground with approximately 50 miles of streets and railway track. The ore lies in a conglomerate lode, which 15 shafts trace downward at a 38 degree angle; several reach depths of 4,500 to 6,000 feet. The shaft cables alone weigh from 4 to 5 tons and are capable of lifting from 6 to 8 tons of ore in the skips, or elevators. The ore is blasted from the rock, hauled to the shaft on railroad cars, and sent to the surface on skips at a speed of 35 to 40 miles an hour. After the ore has been crushed, screened, washed, separated from the rock by a vibrating machine, and smelted, the finished product goes by rail or inland canal to deep-water ports, whence it is shipped.

In AGASSIZ PARK, presented to the village by Alexander Agassiz, former president of the Calumet and Hecla Company, are tennis courts, baseball grounds, an athletic field, and a COLOSSEUM in which indoor skating, boxing, and other athletic events are regularly held.

ITALIAN HALL, on 7th St. between Elm and Pine Sts., was the scene of the city's most horrible tragedy, a disaster that occurred during the copper strike of 1913. Late on Christmas Eve, when the hall was jammed with families of strikers, someone arose and shouted 'Fire! Fire!', and, in the mad rush that followed, 72 women and children were trampled to death. The alarm was false, yet no one was prosecuted.

Right from Calumet on US 41 to OSCEOLA, 1 *m.* (400 pop.), location of the OSCEOLA MINE, a Calumet and Hecla unit. Thirty-one men died in a fire that broke out on a lower drift of this mine in 1895.

LAURIUM, 37 *m.* (1,203 alt., 4,916 pop.), is principally a residential community populated by miners and business people from Calumet. The GIPP MEMORIAL FOUNTAIN, at Tamarack and Lake Linden Sts., was erected in honor of George Gipp, native of the village and former football player at Notre Dame University.

The LAURIUM CITY AIRPORT, at the eastern end of 3rd St., was once used by Army flyers from Selfridge Field (*see Tour 9*) for winter maneuvers, the planes being equipped with skis for landing on snow and ice.

LAKE LINDEN, 41.5 *m.* (650 alt., 1,714 pop.), at the head of Torch Lake, has grown up around the CALUMET AND HECLA STAMPING MILLS (*not open*), one of the largest units of the kind in the country. For more than a half century, the refuse from the mills has been dumped into the waters of the lake; a reclamation plant on the lake shore salvages copper from the stamp sand. Sand yielding \$15 a ton can be treated profitably under the new process.

TORCH LAKE (L), about six miles long and a mile-and-a-half wide, is a part of the great Portage Lake depression filled by Lake Superior after the melting of the Wisconsin glacier. There is a deep-water channel from Torch Lake through Portage to Superior; it is thus more of an inlet or bay than a lake. In many places, the waters are stained a reddish-brown by the suspended iron rust and conglomerate sand.

HUBBELL, 43.5 *m.* (650 alt., 1,400 pop.), also on Torch Lake, is the site of the CALUMET AND HECLA SMELTING WORKS (*not open*).

DOLLAR BAY, 48 *m.* (1,000 pop.), named for the shape of the bay on which it was established, was settled as a lumbering community. After the timber in the district had been cut, the settlement was maintained by its Portage Lake harbor. PORTAGE LAKE extends from Keweenaw Bay northward for 21 miles, practically cutting in two the 23-mile-wide peninsula. A two-mile canal dredged by private interests, and later taken over by the Government, from the head of Portage to the Superior shore, makes the upper part of Keweenaw Peninsula an actual island. It has also made Portage a great cross-peninsula waterway. In the vicinity of its industrial cities, Portage Lake has been contaminated by wastes and sewage; elsewhere there are numerous coves and inlets where the water is fresh and game fish are plentiful. At many of these points are parks, resorts, and camping grounds.

RIPLEY, 50.5 *m.* (400 pop.), is the oldest ferry landing on Portage Lake. Service was begun here in 1846.

HANCOCK, 51.5 *m.* (640 alt., 5,795 pop.), a city on Portage Lake at its narrowest point, is a twin of Houghton, a village on the southern shore. As with other communities in the peninsula, this city, named

for the patriot John Hancock, owes its growth and development to copper mining. In 1848, the Quincy Mining Company opened the QUINCY COPPER MINE, which became one of the leading producers on the range. The Quincy Mine, an inclined shaft, has 93 levels cut into the rock at regular intervals of about 100 feet. The shaft cables, working on a drum or hoist 30 feet in diameter, are more than 2 miles long and weigh approximately 5 tons. The skips which work in balances—one rises as the other descends—weigh 5 tons each and carry about 8 tons of ore when loaded to capacity. Loaded skips are hoisted at the rate of 3,000 feet a minute. The refined copper is transported to deep-water docks on Portage Lake. To date the Quincy Mine has produced more than 300,000,000 pounds of refined copper.

In addition to its mine, Hancock has iron and brass foundries, machine shops, and a mining-machinery manufactory. The city's population includes 35 different racial groups, descendants of immigrants brought in to work the mines. One of the largest groups, the Finns, established a Finnish cultural center with SUOMI COLLEGE, Quincy and Dakota Sts., built in 1899, as the principal unit. The college, a red sandstone building in the Tudor style, has four departments: a junior college, a modern commercial school, a music department, and a theological seminary. The college is operated by the Finnish Evangelical Lutheran Church, and is the headquarters of the Suomi Synod of this denomination.

Cornishmen, master miners imported from Great Britain, form another large racial group. Their special dish, Cornish pasty, is a favorite food throughout the Copper Country and in many sections of the iron-producing ranges. Although there are variations of the recipe, the ingredients remain the same. A crust, made with flour, shortening, and salt, is rolled to the proper size for an individual dish. Equal portions of beef and pork are diced into small pieces and added to diced potatoes, onions, and turnips. This mixture of meat and vegetables is placed on half of the crust, and the other half is turned over to cover it and finished with a rolled edge. Before being placed in the oven, a small hole is cut in the top of the crust for the steam to escape, and a piece of butter placed there for additional flavoring. The pasty is baked from 45 minutes to an hour in an evenly heated oven. Before it is removed from the oven, two teaspoonfuls of water are added through the hole in the top.

Native red sandstone is the most widely used building material in Hancock and Houghton. Many business structures are built completely of sandstone, and scores of others have sandstone trim, a feature unusual in the architecture of Michigan communities. The quarry where the stone was cut, at the eastern entrance to the Keweenaw waterway, about 20 miles east of Houghton, was closed late in the nineteenth century, although at one time it was believed to be the largest in the country.

Right from Hancock on State 203, which follows the northern shore of Portage Lake, to HANCOCK BEACH AND TOURIST CAMP (*all camping conven-*

iences), 2 m. (L), a popular, well-equipped park on upper Portage Lake. The beach is long, sandy, and very clean. Included in the beach equipment are sand slides, pontoons, and a diving tower of moderate height.

PORTAGE LAKE SHIP CANAL (L), 7 m., two miles in length, links Portage Lake with Lake Superior. At the mouth of the canal is a U. S. Government lighthouse (L). At 11 m. is FREDERICK J. McLAIN STATE PARK (*picnicking, camping*), a wooded tract of 338 acres between Bear Lake and the shore of Lake Superior.

State 26 continues southward, across the inter-city bridge. Between the two cities, Portage Lake becomes a narrow strip of water.

HOUGHTON, 52 m. (637 alt., 3,757 pop.), named for Douglass Houghton, is an industrial center, the seat of Houghton County, and the chief shipping and distribution point of the Keweenaw Peninsula. The village lies, as does Hancock, on shelves of land that rise sharply from the shore of narrow Portage Lake. Docks and warehouses occupy one level; Sheldon Street, the main east-west business thoroughfare, follows the second level in a course that parallels the waterfront; and south of Sheldon Street, sweeping sharply upward, are the residential blocks.

Founded in 1852, Houghton, the oldest incorporated settlement on the peninsula, owes its growth and wealth to the copper industry. Between 1855 and 1870, more than 200 locations were prospected south of Portage Lake; a number of these penetrated rich lodes, became copper bonanzas, and paid big dividends for a time. As a result of the boom in copper between 1875 and the first World War decade, the place became an important governmental and business center. Production was resumed after the eight-month copper strike that occurred in 1913; but, in the post-war decade, a large number of mines permanently closed down. In 1937, a definite pick-up was manifest in copper mining in these, the world's deepest, shafts.

In the 300-block on College Ave., overlooking the Portage channel, are the buildings of the MICHIGAN COLLEGE OF MINING AND TECHNOLOGY, founded and maintained by the State. The regular courses of the school include geology, general science, and chemistry, and every form of mining, metallurgical, civil, and electrical engineering. Because of its situation in the mining region, the college is unusually well prepared to give practical training to students. Graduates have developed mines and properties from Montana to Mexico, from the Andes to the Transvaal and Asia.

On the fourth floor of the ENGINEERING BUILDING, College Ave. and Cemetery Road, has been established the outstanding COLLEGE OF MINING MUSEUM (*open 9-5 weekdays*), which contains specimens from Michigan's iron, copper, and gold ores, as well as a comprehensive collection of manufactured articles and by-products. On the lawn of the Engineering Building is a piece of float copper weighing 4,836 pounds, donated to the college by the Copper Range Company in 1936. Float copper is native copper transported from its original source by glaciers, streams, or other eroding agents.

Among the many tourist accommodations just outside the city limits is the HOUGHTON TOURIST PARK (*camping, picnicking, boating*), at the eastern edge of town, between US 41 and the shore of Portage Lake.

Houghton is at a junction with US 41 (*see Tour 20A*).

Southwest of Houghton, State 26 continues along the copper-bearing strip. The elevation of the range affords a wide view of the Keweenaw waterway, extending both east and west from Houghton.

ATLANTIC, 55 *m.* (1,100 pop.), a former mining village, was once the site of a moderately profitable mine that paid nearly \$1,000,000 in dividends.

SOUTH RANGE, 57.5 *m.* (1,120 pop.), on the Copper Range Railroad, is the chief ore-shipping point of the lower copper region. Although there are many Swedes and Finns here, the dominant ethnic group is Italian. The old Baltic Mine, now inactive, is in the eastern village environs; in 1933 one of the mine buildings was transformed into a cheese factory.

TRIMOUNTAIN, 59 *m.* (700 pop.), obviously was named for three near-by peaks. Since the abandonment of local mines, most of the inhabitants have found employment in neighboring villages, principally PAINESDALE, 60.5 *m.* (1,203 alt., 1,270 pop.), where there is still some mining activity.

Southward, State 26 continues along the copper range and penetrates a rolling, wooded section patterned by lakes and streams. There are several stands of maturing hardwood and occasional patches of pine and hemlock, alternating with farm lands.

TOIVOLA (Fin., pron. Toy-vo-la, the place of Toivo), 66.5 *m.* (450 pop.), formerly a logging camp, is a small Finnish agricultural community. The industry of the citizens is manifest in the neatness and cleanliness of the quiet village, attractively set against second-growth woodlands, and in the laborious cultivation of the somewhat barren soil.

LAKE ROLAND (L), 76 *m.*, is the site of HOUGHTON COUNTY PARK (*camping facilities*), a wooded plot of about 20 acres with a wide frontage on the water. The long, sandy beach is carefully supervised. Boats are available for rowing, fishing, and outboard motoring. The trails and roads around the Twin Lakes district, which is overgrown with mixed stands of pine and birch, attract both sportsmen and hikers.

At 89.5 *m.* is a junction with State 35.

Left on this road, past LAKE MINE, 0.3 *m.* (75 pop.), formerly a mining center, to BARAGA, 28 *m.* (*see Tour 20A*).

MASS, 92 *m.* (1,128 pop.), was once a lumbering village, then turned to mining, and, after the closing of the numerous copper locations, to dairying. The STELLA CHEESE FACTORY, south of the village, has a large output of Italian types of cheese. Throughout the hills to

the north are great piles of rock, reminders of the mining activity of bygone days.

At 96.5 *m.* State 26 ends at a junction with US 45 (*see Tour 20B*), 2 miles east of Rockland (*see Tour 20B*). The route continues southward over US 45.

The highway tops the crest of NORTH MILITARY HILL, 98 *m.*, named for a military road that once followed this route. Vantage points along the hill offer changing panoramas of the broad, deep valley of the East Branch of the Ontonagon River, crossed at 99 *m.*, which flows northwestward to Lake Superior. Southward, beyond the river, the road climbs upward again, reaching the crest of SOUTH MILITARY HILL at 100 *m.*

BRUCE CROSSING, 111 *m.* (127 pop.) (*see Tour 18b*), is at a junction with State 28 (*see Tour 18b*). PAULDING, 120.5 *m.* (29 pop.), is a railroad stop in the midst of the forest.

Left from Paulding, on an earth road to BOND FALLS (L), 3.5 *m.*, on the Middle Branch of the Ontonagon River. Previous to 1937, the falls was among the most beautiful in the Upper Peninsula, tumbling 60 feet over a shelf of rock 100 feet wide. In that year a power company dammed the river to create a reservoir, from which water was piped four miles to increase output of a power development on the South Branch of the Ontonagon (*see Victoria Dam, Tour 20B*). This so depleted the river's flow that the beauty of Bond Falls was ruined. The dam was locally authorized and completed before the State department of conservation was notified, but, in 1938, that bureau started legal action to force the company to permit a constant flow of water through the normal Middle Branch course and over the falls. An out-of-court compromise was reached in 1939, by which the power company must allow 35 cubic feet of water per second to pass over the falls for 9 months of the year, and 62½ feet per second during the months of June, July, and August. This is estimated at about a quarter of the normal flow of the Middle Branch. Great sections of the red sandstone river bed are still exposed, and the falls has regained something of its former loveliness. Agate Falls (*see Tour 18b*), downstream from Bond Falls, was also affected by the dam.

WATERSMEET, 129 *m.* (500 pop.) (*see Tour 16c*), is at a junction with US 2 (*see Tour 16c*).

At 137 *m.* is a junction with a graveled road.

Left on this road to LAC VIEUX DESERT (pron. lac view de-zair), 7 *m.* (70 pop.), a historic Chippewa village and burial ground on the shores of Lac Vieux Desert, a large body of water on the Michigan-Wisconsin boundary. The graves are marked by low wooden sheds. The resident Indians are a remnant of the Chippewa nation that once ruled the entire Upper Peninsula. In the past the tribe retained a degree of self-sufficiency through Government land grants. Recent encroachments by white men, coupled with hunting and fishing restrictions, robbed the Indians of their last primitive means of subsistence. From this village runs the historic LAC VIEUX DESERT TRAIL to L'Anse Bay on Lake Superior (*see Tour 20A*).

US 45 crosses the WISCONSIN LINE, 138 *m.*, to Land O'Lakes, Wisconsin.

Tour 20A

Houghton—L'Anse—Skaneec—Huron Mountains; 53.5 *m.* US 41, State 35.

Roadbed hard-surfaced or graveled throughout; two lanes, closed only after heavy snows.

Duluth, South Shore and Atlantic Ry. parallels route between Houghton and L'Anse.

Accommodations in villages; camp sites and cabins along highway.

Roughly paralleling the shores of Keweenaw Bay, in a great V, the route passes through a rich hunting and fishing district that has attracted sportsmen since the days of the Indians and *voyageurs*.

HOUGHTON, 0 *m.* (637 alt., 3,757 pop.) (*see Tour 20*), is at a junction with State 26 (*see Tour 20*).

The landing field at HOUGHTON AIRPORT (L), 2 *m.*, was made by leveling the stamp sand dumped on the shore of Portage Lake by the Isle Royale Mill of the Calumet and Hecla Consolidated Copper Company (R). The field, about a mile long and half a mile wide, covers a 12-foot layer of stamp sand.

CHASSELL, 8 *m.* (500 pop.), at the lower edge of Portage Lake, is a farm-trading and resort center. At 10.5 *m.* the route crosses the STURGEON RIVER—one of several streams of that name in the State—which drains Otter Lake and the Otter River Basin, a game-fish region noted locally.

KEWEENAW BAY, 22 *m.* (100 pop.), like most bay communities, is enlivened during the summer months by a ceaseless influx of vacationists. At one time Keweenaw Bay was the site of a stamp mill, and the bay shore is still black with stamp sand.

ASSININS (from *Asin-nee*; Ind., little rock), 26 *m.* (150 pop.), was founded in 1843 by Father Frederick Baraga, a member of the Hapsburg family. At the mission, which he established in order that 'ignorance and vice' among the Indians might be eradicated, Father Baraga compiled a grammar and dictionary of the difficult Ojibway language. When he died in 1868, the ASSININS MISSION (L) was continued; Indians whom he had befriended added several red sandstone buildings to the original group. The mission, with its aging structures and Indian school, comprises a village by itself. A model farm, established by the priest, earns an annual revenue sufficient to supply most of the needs of the resident Sisters of St. Joseph.

BARAGA, 28 *m.* (621 alt., 1,045 pop.), is a bay-shore village named in honor of Father Baraga. A favorite camping place of the early *voy-*

ageurs, it is still so pleasant a spot that more and more people visit it each summer. Fishing is excellent; at Lighthouse Point, on the northern edge of the village, wild cranberries grow in abundance. Baraga is at a junction with State 35, which leads west to LAKE MINE, 27.7 m. (75 pop.), and State 26, 30 m. (see Tour 20).

The BARAGA STATE PARK (*camping facilities*), 30 m. (R), is a densely wooded plot of 39 acres with a wide frontage on L'Anse Bay. In the cabins adjoining the park, the tourist may try the novelty of a Finnish bath, or *sauna*. In most *saunas* the steam is created by throwing cold water on hot stones, but this one has been modernized by the substitution of steam radiators for the stones.

L'ANSE (Fr., the bay), 33 m. (620 alt., 2,421 pop.), at the most southerly point of Keweenaw Bay, is the Baraga County seat. Heavily wooded and sheltered by a small bay at the head of the larger body of water, the site was a campground for French explorers, trappers, and missionaries on their westward journeys. There they met with the Indians to trade, exchange gifts, and smoke the pipe of peace. A remote district, it has retained its early beauty and is becoming increasingly popular as a summer resort. A tourist information center is maintained in the L'Anse City Hall on Main St. At West and Front Sts. is a good bathing beach.

Right (*south*) from L'Anse on US 41 is ALBERTA, 10 m., built by Henry Ford in 1936 as part of an experiment of self-sustaining communities. The original plan called for the settlement of 30 selected families, who were to farm lands cleared in the forest and work at a sawmill in the village. No farms have been cleared as yet, and the 12 families who were living in the community in 1939 had full-time positions at the sawmill. An excellent example of modern village planning, Alberta has a \$15,000 water system, a \$6,000 sewage system, electricity, boulevard lights, a church, a school, and a fire department. The 12 houses are set in a horseshoe formation opening on the main road. Surrounded by a virgin hardwood forest (owned by Ford), unbroken for miles by any sign of settlement, the new homes, neat streets, and well-kept lawns have on first sight an appearance of unreality. In the eastern section of the village, Plumbago Creek has been dammed to form a lagoon. Ahead on US 41 is a junction with State 28, 17 m. (see Tour 18b).

East of L'Anse the route follows State 35, known as Bay Shore Drive, along the shores of Huron Bay. It crosses numerous trout streams, traverses a stretch of country unexcelled in the State for deer hunting, and ends west of the Huron Mountains. These mountains, with their sheltered deep-set lakes, are accessible only by foot.

At 36 m. is a junction with an earth road.

1. Right on this road to a junction with a sand road, 15 m.; L. at the junction to an INDIAN CEMETERY (R), 2.5 m.; some of the graves are covered with low wooden shelters.

2. Left on the earth road to ZEBA (Ind, little river), 05 m (300 pop), an Indian settlement. Father Baraga established a mission here in 1831 but later moved across the bay to Assinins. A Methodist mission, founded early in the nineteenth century, attracted the Indians from their village near the present site of Pequaming. On a rise above the lake is a small church in which services are conducted each Sunday afternoon.

PEQUAMING (Ind., wooded peninsula), 5 m. (251 pop.), was named for the mushroom-shaped point of land upon which the village is situated. An Englishman, Charles Hebard, laid out the village in 1879, according to the pattern of suburban villages of England. Large oaks shaded the streets where board walks curved around each obstructing tree. Shingle-sided houses, soon mellowed by the weather, were set in wide lawns shaded by oaks and pines. Their tranquil dignity now contrasts strikingly with the raw newness of the modern houses. The old-timers hark back wistfully to the 'good old days' when the Hebard—father and son—operated a sawmill here. There was no punching a clock then, and no complicated process of rehiring after a shut down. The men simply returned to work when the whistle blew. None of the shut-downs lasted very long or worked serious hardship, since rent, water, and light were free, and wood for fuel could be obtained by hauling it from the mill. The Hebard erected the UNION CHURCH BUILDING, of Gothic design, and attended services with the mill hands; in other ways—by Christmas gifts and social affairs—they maintained an easy friendliness between the workers and themselves.

Henry Ford bought the peninsula in 1924, continuing operations at the mill with timber cut from his large hardwood holdings in the vicinity. He built a new school system for the village and installed his own teachers, with the approval of the L'Anse school board. The financial support given by Ford to the Pequaming educational system is estimated at \$1,000 a month.

Pequaming is predominantly Norwegian, and a few Norwegian customs survive. Sweet rye is popular, and *lutefisk*, a salt-water fish dried in the sun and soaked several days before cooking, is served during Christmas holidays. Frenchtown in the north has been known as Finntown, since about 1900. The FORD SAWMILL is near the principal street at its western terminal. Logs are trucked to the mill, and lumber is shipped out on Ford vessels.

At 40 m. is a junction with a side road.

Right on this road to SILVER FALLS, 1 m., on the Silver River, popular during the spring trout runs. The cascade drops 50 feet in less than a quarter of a mile.

HURON BAY PARK (*stoves, tables, bathhouses, camping; boats 25¢ a day*), 44 m. (L), has a mile of frontage on the bay. The Slate River flows along the southern limits, and within easy reach are three trout streams. Lake trout caught in the bay weigh as much as 40 pounds. Large speckled trout are taken near the reefs at the tip of Point Abbaye.

Right from the Slate River bridge at Huron Bay Park to SLATE RIVER FALLS, 0.5 m., which may be reached by a foot trail high on the eastern bank of the Slate River or, when the water is not too deep, by an eastern bank trail that follows the river closely, fording it several times.

At 48 m. is a junction with an earth road.

Left on this road is SKANEE (pron. Skay'nee), 1 m. (315 pop.), first settled by fishermen because of its protected harbor, and later homesteaded by Swedish lumbermen. The pine logs were towed in long rafts across Keweenaw Bay and up Portage River into the copper country. When the timber was depleted, the residents turned to farming, for a long time using oxen to till the soil.

Thousands of bushels of apples and potatoes are shipped from Skanee; cream, together with other dairy and poultry products, is sent daily into the copper country. Fishermen still set their nets across the mouth of Huron Bay and obtain trout and whitefish for the market; but of the once-important lumber industry there is only the intermittent operation of small portable sawmills and tie and shingle mills. During the fall hunting season, Skanee entertains a large

transient population and holds, at the community hall, its annual November Hunters' Dance, the biggest event in the village's social calendar.

The HURON RIVER, 53.5 *m.*, marks the present (1940) end of State 35 on the western edge of the HURON MOUNTAINS. The wild and relatively unexplored region is best visited on foot (*guides in Skanee*). Across the Huron River, the trail ahead, an old logging road, goes through dense hardwoods into a region of lakes and streams, where there is every variety of native Michigan wild life. In the vicinity are many points of interest, including the vacant LETHERBY HOMESTEAD BUILDINGS, where for many years James Oliver Curwood sought retirement and did much of his writing. Two lakes in the area have been named the Curwood Lakes. The TUTTLE HOMESTEAD, also unoccupied, is sometimes used as headquarters by trout fishermen, trappers, and hunters.

The EAST BRANCH FALLS on the Huron River are near the old MANGANESE ORE PITS, and in this vicinity also are old GOLD PITS and SILVER PITS. The upper reaches of the Huron and Yellow Dog Rivers offer excellent fishing in unusually beautiful settings.

Tour 20B

Junction State 26 and US 45—Rockland—Ontonagon—Porcupine Mountains; 35 *m.* US 45, State 64 and 107.

Roadbed well graveled, with 5 miles of hard-surfacing; two lanes, closed only after heavy snows.

Hotel accommodations at Ontonagon; cabins in villages; numerous campgrounds.

The route proceeds over US 45 from its junction, 0 *m.*, with State 26 (*see Tour 20*). Between Rockland and the Porcupine Mountains is one of the more remote recreational districts of the Upper Peninsula. This was once a mining country of some importance, but residents of the region now depend on forest products and the tourist traffic for their livelihood. West from Ontonagon are many secluded camping sites and quiet streams, seldom visited, even during the months of July and August when the country is at its loveliest.

At 0.3 *m.* is a junction with a cinder road.

Left on this road to the MICHIGAN MINE, 0.1 *m.*, opened in 1937 on a prolongation of the old Michigan Mine lode, three-fourths of a mile west. The mine shaft is 1,750 feet deep, with a 48-degree incline. Here, on the stock pile,

the visitor will often see masses of native copper, ranging from a few pounds to several tons in weight.

At 1.2 *m.* is the SITE OF THE OLD MICHIGAN MINE (R), closed in 1921. The largest mass of copper found in Michigan, weighing about 420 tons, was taken from this mine.

ROCKLAND, 2 *m.* (700 pop.), surrounded by rock hills thinly covered with soil, boomed when a huge mass of pure copper was unearthed here in 1856. Numerous mines were developed, but only a few were financially successful.

The majority of the miners were either Irish or Cornish. If trouble between the two groups failed to materialize on St. Patrick's Day, March 17, it invariably broke out on Orangemen's Day, July 12.

Left from Rockland on a graveled road to a junction, 0.4 *m.*; L. here, crossing the ONTONAGON RIVER, to another junction, 4.2 *m.*, near the old VICTORIA MINE (R).

Left at this junction through the abandoned village of VICTORIA, 4.3 *m.* Trees have grown up around the 80 houses of the village, screening all but a few of them from the road. The principal mines about Victoria were financed by foreign investors, whose agents began to prospect the area shortly after Governor Lewis Cass visited here in 1820 and made his report to the Government. The Empress of Russia was a large shareholder in one mine; in another, the Duke of Gloucester owned a controlling interest. The properties were closed one by one until only the Victoria was left, and this was closed in 1921.

The VICTORIA DAM, 5 *m.* (R), was constructed on the combined South and West Branches of the Ontonagon River in 1931 by the Copper District Power Company. Water is carried to the power house through a wooden flume ten feet in diameter and one-and-a-fourth miles long. The flume snakes its way down the valley of the Ontonagon, carrying an average of 279 cubic feet of water per second to the power house. In building the Victoria Dam, engineers utilized an ingenious HYDRAULIC AIR COMPRESSOR (R), 52 *m.*, which furnished all the power necessary for operating hoists, derricks, cement mixers, pile drivers, and rock drills. The compressor, built by Victoria Mine engineers in 1904-5, generates a maximum of 6,000 horsepower, under 117½ pounds of air pressure. This power was used to operate not only the Victoria Mine, an ore-hauling locomotive, and a stamping mill, but also a phonograph in Victoria.

The main unit of the compressor is an underground cavern blasted out of solid rock. Water from the river is carried 176 feet underground into the cavern by three steel pipes. Air contained in the water is released in the cavern and forms a considerable pressure upon the water surface. The only outlet is a submerged safety valve, which opens only when the air pressure in the cavern is sufficient to lower the water level below the valve. When this occurs, usually in spring and fall, a column of air and water, released through an 8-inch outlet pipe, gushes 150 to 200 feet into the air. This artificial phenomenon is known as the VICTORIA GEYSER. Given a sufficient head of water, the geyser will erupt at intervals of 60 seconds.

ONTONAGON (Ind., place of the bowl), 12 *m.* (670 alt., 1,937 pop.), the only Lake Superior port giving safe anchorage between Eagle River and the western Michigan boundary, is the Ontonagon County seat. It stands on the site of an old Chippewa village.

From earliest times, white men traveling in this region heard rumors of the existence of a great mass of copper resting on the river-banks nine miles upstream. In 1667, Father Dablon, the French missionary-explorer, confirmed the authenticity of these rumors. The boulder,

known as the Ontonagon Boulder, was inspected, hacked at, marveled over, and described by scientists, authors, and the merely curious until 1843, when, much the worse for wear, it was removed. It is believed that the Indians venerated the boulder. In January 1766, they guided Alexander Henry to the spot where it lay, a kindness repaid by his report of the trip in his *Travels and Adventure in Canada*. According to Henry, the boulder lay ten miles upriver. He estimated its weight at five tons, and stated that the ore was so pure and malleable that he had easily hacked off a piece weighing 100 pounds. Thereafter, the boulder, product of untold ages, began to be hacked away. Henry R. Schoolcraft, who visited it in 1819 and compiled the second written account, found many marks of chisels and axes upon it, and estimated the metallic copper content to be not in excess of 2,200 pounds. Accounts by other observers differed in their description of the size, location, and content of the boulder. Douglass Houghton, State geologist, wrote the last printed account of the boulder as a part of his official report of 1841; thereafter, the saga becomes rather involved. Out of the mass of conflicting stories of its removal emerges the fact that a Julius Eldred of Detroit paid the Indians \$150 for absolute ownership of the boulder. The Federal Government granted Eldred permission to occupy the site for mining purposes but declared itself owner of the copper mass, which it sold to him for \$1,365, a sound business transaction on the part of the Government, since the market value of the copper in 1843 was found to be about \$600. The story now becomes pure Gilbert and Sullivan. Eventually, the persevering Eldred and his boulder reached the river mouth, only to be met by War Department officials, who prepared to seize the prize and carry it off to Washington. They changed their minds long enough to allow Eldred to transport the boulder to Detroit, where, for a time, he charged a cash admission for the privilege of beholding it. But the Government again stepped in with orders that the boulder be shipped to Washington, where it now reposes in the Smithsonian Institution. In 1847, Congress allowed Julius Eldred the sum of \$5,644.98 'for his time and expense in purchasing and removing the mass of native copper . . .'

The early stories of the Ontonagon Boulder focused attention on the region of the Porcupine Mountains. The first mining expedition was headed by Alexander Henry (*see Mackinac Island*), who attempted to establish a mine here during the winter of 1771-2. Spring rains and thaws caused his shaft and tunnel to cave in, and he abandoned the enterprise without procuring the fortune he had anticipated. After the 1843 treaty with the Chippewa, which granted white men the right 'to search for and carry away metals or minerals' from any part of the Indian country, many mines were opened in the region, but none proved successful, partly because of insufficient backing, partly because the tasks were more arduous than prospectors had been led to expect by the glowing talk of 'loose' copper. Disillusioned, most of the prospectors departed in 1849 for the gold fields of the West. Those who stayed turned to lumbering and established several mills during the

period that followed the Civil War. Among the larger mills were those of the Diamond Match Company, which spread along both sides of the river in the center of the village. For some years Ontonagon seemed destined to occupy a position of importance as a lumbering and shipping center. Then, in 1896, the village and its several mills were destroyed by fire, and the match concern refused to rebuild. From this set-back, Ontonagon has but slowly recovered. Large new mills have been constructed since 1920, and the major industries are the production of lumber and the manufacture of paper.

It was in Ontonagon that Michigan's first telephone line was established. In 1876, an operator of a local mine attended the Philadelphia Centennial, where the invention of Alexander Graham Bell was on exhibition. After examining the invention closely, the operator returned home and built a telephone system 20 miles long.

Ontonagon is scattered over sloping land on both sides of the Ontonagon River. Turbulent in its upper reaches, the river is wide and gentle as it flows through the village on its way to the lake. At its mouth, lake trout are caught, and near the center of Ontonagon, wall-eyed pike are plentiful.

The LAKE SUPERIOR LUMBER COMPANY SAWMILL (*open by permission*), Park Road on the lake shore, has an average annual output of 35,000,000 board-feet. Many miles of company-owned railroad penetrate blocks of timber, good for 12 years of work for both mill and camps, with more than 350,000,000 feet of virgin timber—maple, birch, and hemlock. The ONTONAGON FIBRE CORPORATION PLANT (*not open*), one block southwest of the river bridge on State 64, has a capacity production of 100 tons of wood pulp daily. The mill and stock pile cover 50 acres. The ONTONAGON TOWNSHIP PARK (*picnic grounds, stoves, bathing beach, bathhouse*), Park Road on the lake shore at the village limits, has a fragrant pine grove where campers may pitch their tents; from the beach that fronts the park, the Porcupine Mountain range is visible to the west.

US 45 terminates at Ontonagon. The route continues on State 64 southwestward along the lake shore.

GREEN, 19 *m.* (156 pop.), is a farm and dairy village on the Lake Superior coast.

SILVER CITY, 25.5 *m.* (25 pop.), a fishing village, stands upon the ruins of an old mining location that once gave promise of becoming a silver bonanza. When silver was discovered in 1872, much of the territory for 60 miles south and east was staked out in claims, but only sporadic mining followed, and it subsided completely by 1876. Assays of \$1,716 coin silver to the ton of rock, a fairly valuable ratio, led to the conclusion that the failures here were owing to lack of funds for proper development and transportation. Indians in this district sold nuggets of pure silver to the whites, but efforts to locate the source of these nuggets went unrewarded. One white man is said to have learned the secret, but he immediately disappeared and was never heard of again.

From Silver City the route continues straight ahead on State 107 to the PORCUPINE MOUNTAINS (*no tourist accommodations*), 31 *m.*, named by the Chippewa, who noted a resemblance between the outlines of the ranges and a crouching porcupine. The mountain country, almost uninhabited, is covered with heavy timber, where large numbers of deer and other game species find shelter. Several clear streams are well-stocked with trout.

At 33 *m.* is a well-defined foot trail.

Left on this trail, a steep climb, to the CARP LAKE MINE, 0.5 *m.*, on a mountain plateau, on which stands an old apple orchard. The trail divides here, the left branch leading straight ahead to the LAKE OF THE CLOUDS; the right branch, marked by a sign, climbs steadily upward to MOUNT PORCUPINE (2,023 alt.), 1 *m.* From its summit, magnificent mountain scenes unfold on all sides. The Carp River, a silver thread, flows through the green valley far below, draining the Lake of the Clouds, highest of Michigan's inland lakes, cradled in a deep valley of the range. The Porcupine Mountains have been thoroughly explored by miners and lumbermen, but these prospectors established no permanent settlements on the lonely slopes. The mountains have retained their wildness and grandeur; surprisingly, they are little known even to the people of the State.

A MINE TUNNEL (L), 33.1 *m.*, reaches back 1,500 feet into the solid rock of the mountain. This tunnel was originally designed to transport ore from the Carp Lake Mine in the mountains to a stamping mill on the shore of Lake Superior.

State 107 ends at a turnabout, 35 *m.* The highway is intended eventually to encircle Mount Porcupine.

Beaver Island

Transportation: From Charlevoix: round trip daily by boat, from opening of navigation to Dec. 15; \$1 each way; automobiles \$3 to \$3.50 each way, according to wheelbase; Sundays and Wednesdays, special rate, \$1 round trip, \$2 round trip for automobiles. Plane service during winter months only, three trips weekly, weather permitting; \$4 one way, \$7.50 round trip. *Landing Field:* One mile S. of St. James at intersection of King's Highway and first east-west road. *Taxi service and cars for hire:* Gallagher's Garage, rates 15¢ per mile, with or without driver; cars may be rented for \$1 an hour. *Bus Service:* During summer months, bus from St. James takes parties for one-hour ride at 25¢ per person. *Yacht Facilities:* Beaver Harbor, at NE. point of island, is almost completely landlocked.

Accommodations: 1 hotel; cabins.

Tourist Information Services: Information Bureau, Bridge St., Charlevoix; Beaver Island Association of Commerce, St. James.

Swimming: Big Sand Bay and Little Sand Bay, both on the eastern shore of Beaver Island; Barney's Lake, Fox Lake, and Lake Geneserath. Swimming in Font Lake and Egg Lake inadvisable.

Boating: Boats may be rented at St. James for trip among the islands; reasonable rates depending on time and distance.

Hunting: Deer, red fox, rabbits, fox squirrels, and some pheasants, in season.

Riding: Saddle horses at King Strang Hotel, or Association of Commerce, \$1 per hour.

Shuffle Board Courts: In front of King Strang Hotel; and between McDonough's store and lake shore.

Annual Event: Homecoming week, in Aug., features boat races, baseball, dances, horse races, and Indian dances. During this week the Charlevoix boat makes regular trips at special rates.

BEAVER ISLAND, largest of the isles comprising the Beaver Archipelago, lies in upper Lake Michigan about 35 miles west of the Straits of Mackinac. At its northern tip is St. James, only town on the group of islands. A modern vessel transports passengers and automobiles between St. James and Charlevoix (*see Tour 15a*) throughout the summer. Beaver Harbor at St. James provides the sole safe anchorage for large boats, but Cable Bay, at the southeast extremity, is safe for boats of less than six-foot draft, except in southerly or westerly winds.

Commonly called Big Beaver, Beaver Island is 13 miles long and between 3 and 6 miles wide. Rising near by from Lake Michigan are Hog Island, Gull Island, High Island, Squaw Island, Trout Island, Garden Island, and Whiskey Island. Hog Island is known among anglers for its abundant small-mouthed bass; Garden Island is the site of extensive Indian burial grounds. At the southwest of Big Beaver are the Fox Islands and the Manitou, two small groups which complete the archipelago.

Big Beaver slopes upward from fine stretches of beach at the east toward a range of sand dunes at the west. The island's seven lakes abound with game fish; Font Lake at the north and Lake Geneserath at the south are comparable with the best spring-fed lakes of the mainland. Streams are short and unspectacular. The largest, River Jordan, drains the central part of Big Beaver and empties into Big Sand Bay on the eastern shore.

Big Beaver's original growth of timber has long since been removed. A heavy stand of new hardwood is being cut by the Antrim Iron Company, which opened a camp at the south end of the island in 1937-8. A network of abandoned narrow-gage logging roads penetrates the wooded areas, and many of these old grades have been converted into highways. A series of county roads links St. James with summer colonies, small settlements, and the agricultural section in the central plains. The forests contain virtually the same animal life as the mainland. The deer, however, have been imported.

ST. JAMES (600 alt., 600 pop.), the fishing and trading center of Big Beaver and the surrounding isles, little resembles the frontier settlement that once served as the capital of a Mormon kingdom and the seat of Emmet and Manitou Counties. Its shops and most of its houses

face one small street that curves crescentlike around the western rim of Beaver Harbor. On this thoroughfare vacationists in shorts and slacks, redskinned Ottawa and Chippewa, sturdy Irish farmers and fishermen, many of whom speak Gaelic, meet in an atmosphere of fish nets and north woods, old ruins and fresh gasoline.

From the evidence thus far uncovered, the first people to live on Big Beaver were mound builders. Their mounds for burial and for worship mark the terrain in many places. The knolls near the settlements and highways have been fully excavated, but those in the backwoods have scarcely been touched. Excavations to date have yielded a quantity of highly polished diorite and sionite implements, together with more crudely formed objects of shale and chert. No collection of these relics has been made, but some of them are displayed at various places in the village.

The Chippewa and Ottawa were in possession of the archipelago when the Colonial period began, and many of their descendants still remain. The first white men in the region were French *coureurs de bois*, who roamed and hunted through the lake country for possibly a century before a permanent settlement was made in Michigan. Apparently some of these adventurers made Big Beaver their headquarters for several decades, calling it *Isle du Castor*. At one point, small fields were cleared and kept in cultivation until erosion set in. The exact date of the settlement cannot be ascertained, but rings in the trees indicate that it may have been founded shortly after Champlain came to America in 1603. Following the disappearance of this colony, no attempt was made to settle the archipelago until long after the territory came into American possession, though traders, trappers, and missionaries visited the islands regularly each season.

In the summer of 1847, a scouting party for the eastern branch of the Mormons, then established at Voree, Wisconsin, made extensive explorations of Big Beaver Island. James Jesse Strang, leader of the expedition, was determined to build a settlement where his followers could live and worship without gentile interference. Finding Big Beaver admirably suited to his purpose, Strang built a cabin, left behind two members of his party, and returned to Voree. Emigration was begun at once, and by winter the Mormon Colony on Big Beaver numbered 18 persons.

In the spring of 1848, the public lands of the archipelago were opened to general homesteading. Fishermen from the Michigan mainland, coveting the rich fishing waters, violently opposed further settlement by the Mormons. Clashes occurred at several places, and feeling ran high, but no blood was shed. Despite this resistance, the Mormon population increased rapidly. Strang arrived in 1849, built a tabernacle, and laid out the town of St. James. During that winter there were further hostilities between the Mormons and mainlanders. In 1850, the major part of the Wisconsin colony came to Big Beaver. Some settled in St. James, but most of them went into the interior and cleared up large farm sites. Among them was the editor and publisher

of the *Voree Herald*, the Mormon weekly newspaper. The name of the paper was changed to the *Northern Islander*, and a printing office was established in St. James; the sheet was read far beyond the confines of the archipelago.

Prior to the establishment of the island settlements, all Mormon property was held in common; a general fund and commissary provided each member with food, clothing, and other necessities; Strang served only as chairman of the central board, or committee. Once the Mormons were firmly entrenched on Big Beaver, their leaders granted personal property rights and incorporated the islands into a Mormon kingdom. On July 8, 1850, when the reorganization was completed, Strang was crowned king in a pageant of great pomp and ceremony.

The rule of King Strang was supreme and absolute, his authority being both temporal and spiritual. The use of tea, tobacco, and liquor was forbidden. His followers were required to pay a tithe of all they earned, produced, or received. This money was expended for improvements, care of the aged and the poor, and payments of State and township taxes. No other form of taxation was used; nonpayment of tithes was punishable by flogging. Strang, claiming to have been divinely instructed on the merits of polygamy, took several wives into his household and ordered his followers to do likewise.

Eventually public opinion forced the Federal Government to investigate conditions on Big Beaver. King Strang and many of his followers were arrested on charges that included counterfeiting money, stealing public timber, and tampering with the mails. Strang was taken to Detroit for trial, when the prosecution could find no witnesses to testify against him in St. James. He assisted in his own defense and proved that the charges were based on suspicion, hatred, and religious prejudice. So eloquent was his address that he and 12 other defendants were acquitted.

Shortly after the trial, Strang was elected to the Michigan House of Representatives, largely through the efforts of the Mormons. Although harassed by non-Mormons in Lansing, he served with dignity and ability. His followers, meanwhile, obtained political control of Emmet County, moved the county seat to St. James, and gave all responsible county positions to members of their colony. Non-Mormons violently attacked the new administration. At the 'Battle' of Pine River (see *Charlevoix, Tour 15a*), when the Mormons came to the mainland to summon three jurors, one mainlander was shot down, and a number of islanders were wounded.

Internal strife appeared in the Mormon colony, as Strang's political success abroad made him more tyrannical at home. He banned long dresses for women and decreed the use of bloomers or knee-length skirts. Many women openly defied this edict, and bitter strife broke out in the Mormon Church, the rebels outnumbering Strang's faction. In dealing with the recalcitrant women, Strang sent some of their husbands to the whipping post and harried and abused them in business, social, and political matters. Eventually, Strang was shot by rebellious

followers on June 16, 1856, and died in Voree 23 days later. His slayers, assisted by naval authorities, escaped on the *Michigan*, a United States revenue cutter. They were escorted to the sheriff of Mackinac County at Mackinaw City and immediately released.

The kingdom did not survive the death of the king. While the internal revolt had been gathering force, the wrath of non-Mormons on the mainland had also been increasing. After Strang's murder, they formed an expedition, captured St. James, and ordered the Mormons to vacate the island and 'take nothing with them.' The Mormons were put aboard the *Keystone State*, which stopped regularly at the island. No count was made at the time, but it was estimated that the band numbered more than 2,600 men, women, and children. Homeless and penniless, the dispossessed colonists went to Chicago, Milwaukee, and other lake ports, from which they dispersed to all parts of the country. The mainlanders seized the movable property and destroyed some of the buildings.

Later, a group of Irish fishermen who plied their trade in the Beaver Island waters came over from Mackinaw City and settled on Big Beaver, establishing their headquarters at St. James. After rebuilding the partly destroyed town and reclaiming some of the farm land, the Irishmen were granted patents to their holdings, and the colony became permanent. The fishermen subsequently induced many of their friends and relatives to immigrate to Big Beaver from North Ireland, so today the populace in the archipelago is predominantly Irish. Small German and French groups have drifted into the settlement, and the Government has permitted a few families of Christianized Ottawa and Chippewa, whose ancestors traditionally owned the islands, to take up land. Some of the Indians are farmers, but most of them are commercial fishermen.

Undeterred by the fate of King Strang, another monarch, King Ben, ruler of the House of David (*see Benton Harbor*), sought to gain a foothold on Big Beaver in the first decade of the present century. The settlers, reviewing old Mormon history, opposed his efforts so strenuously that he eventually abandoned the plan. Later, he managed to buy a controlling interest on High Island, an isle of 4,000 acres, situated three-and-three-quarters miles west of Big Beaver.

To High Island, the king banished members of his cult who incurred disfavor, and, later, the aged, crippled, and chronically ill were also sent there to await death. The isle became widely known as the 'Siberia of Michigan.' The exiles, held in virtual peonage, were forced to work long hours without any return except food and shelter. Agriculture was the principal industry, but a bakery, greenhouse, dairy barns, and sawmill were also maintained. The products of these industries were shipped to Benton Harbor. This unhappy settlement, founded in 1912, went out of existence in 1928 after the death of King Ben and the division of the House of David. Five hundred exiles were freed at that time.

FOOT TOUR

North on Main St. from the center of St. James; 4.1 m.

The MORMON PRINTING OFFICE (*open by permission*), 0 m., one of the few Mormon buildings to escape destruction, when the sect was evicted from the island, was later converted into a hotel, which became famous along the lakes as the Gibson House.

The main street, St. James, follows the bight of the bay, where weatherbeaten fish houses and numerous net reels testify to the principal occupation of the islanders.

The POST OFFICE (L), 0.2 m., first established in the Mormon reign, is the only mail service point in the Beaver Archipelago.

A narrow road, a continuation of the street, extends around the bay, affording an excellent view of the inlet and the wooded headlands that enclose the harbor.

The HARBOR LIGHT (*open daylight hours*), 1 m., erected during the Mormon era, has led scores of ships to safety during lake winds and storms. One vessel, in the early history of the light, limped into the harbor with her hold full of water, but sank before she could reach the docks. The lighthouseman was drowned in attempting to rescue the crew. After the tragedy, his widow, Elizabeth Whitney Williams, was given charge of the lighthouse. During her period of service, she wrote *A Child of the Sea* and *Life Among the Mormons*, recounting the author's experience in the Mormon Kingdom and giving an unusual picture of conditions on Beaver Island in that decade.

When the COAST GUARD STATION (*open every afternoon*), 1.1 m., was established in 1875, the original crew was composed largely of local fishermen. Through their knowledge of surrounding waters, many a thrilling and hazardous rescue was accomplished. The station is connected by telephone to the mainland.

The road, narrowing to a path, swings northward through a heavy grove of cedars where the branches meet and interlock overhead, shutting out the sunlight. On the hottest days, this beautiful lane is cool, refreshing, and cedar-scented.

The road reaches the northern coast of the island at 1.6 m., and turns left along the shore line. Across the blue-green waters, the wooded heights of Whiskey, Squaw, Hog, and Garden Islands are visible on clear days.

PORTAGE, AN INDIAN LANDING, 2 m., is a sandy, unprotected beach where the Indians came, after tending their gardens on Garden Island, to portage from this point to Beaver Harbor. Many arrowheads, stone implements, and other relics have been found here.

At 3 m., is PAGETOWN, the site of an old village, which, unlike St. James, was never rebuilt after the Mormon expulsion. Mormon ruins are visible at several points, and Indian arrowheads and relics are plentiful.

Right (*directly ahead*) on the path along the shore are INDIAN BURIAL GROUNDS, 1 m., with comparatively recent as well as ancient graves; though the Indians now prefer to inter their dead on Garden Island. The burial pits were shallow, and the bodies were often disturbed by animals. Bones, artifacts, and implements are strewn about the vicinity. Near the cemetery is INDIAN POINT, 1.2 m., the highest elevation on the northern shore line. The bluff, once frequented by Indian lookouts, provides a comprehensive view of the upper shore and adjacent lake waters.

The main tour continues left from the site of Pagetown on an old railroad right-of-way from which the rails have been removed. At 3.5 m., is 300-acre FONT LAKE (*boats for hire*), which served as a baptistry for King Strang and the Mormon Church. Here, in warm weather, the rites of baptism were administered to hundreds of colonists.

The road leads from the lake through a beautiful growth of pine and hardwoods back to St. James, 4.1 m.

MOTOR TOUR

St. James—Whipping Post—Protar's Home and Tomb—Crosses Bluff—Lighthouse—Lake Geneserath—Big Sand Bay—Holy Cross Church and Buildings—Weather Signal Tower—St. James; 32.3 m.

The route is south from Main Street in ST. JAMES, 0 m., over King's Highway, constructed by, and named for, King Strang. Some parts of the route parallel the irregular coast line; other sections skirt inland lakes or traverse checkered woodland areas, stippled with pine, fir, cedar, and birch, and astir with deer, foxes, and other wild life. Historically interesting are the ruins of Mormon homes and farmsteads, sandwiched between timbered stretches in the central part of the isle.

At 0.5 m. is the MORMON WHIPPING TREE (L), an aged, spreading beech, where transgressors of Mormon laws once were tied and flogged. After the colony was fully established, a whipping post was erected, and the tree was no longer used. A stockade was eventually built around the spot, to shut out the public.

At 1 m. is the junction with an improved township road (*for road eastward, see below*). Here the route turns R. to 80-acre BARNEY'S LAKE (*boats for hire*), 3 m. The shores are bounded by a series of sandy knolls, many of which are 30 feet high. Because of these mounds, the lake has not been extensively developed for resort purposes, though it offers excellent fishing.

At 3.8 m. the route turns R. on an improved road to a junction at 4.2 m.

Right (*straight ahead*) on this road to the PROTAR PLACE, 0.6 m., a run-down farm site that was once the home of Fedor Protar (1838–1925), a Russian exile and philanthropist, who for more than three decades supplied islanders with free medical care. Exiled from Russia because of his political beliefs, Protar became successively an editor in Germany, an actor and magazine editor in the United States, and, after 1892, a recluse on Beaver Island. With a doctor's degree

from the University of Dresden, he was for years the only medical man on the island. Protar never talked about himself nor revealed his true identity to the islanders, who held him in great affection. Not until after his death on March 4, 1925, did they learn that their benefactor was Baron Perrot, of Pletn, Russia, who had taken the name of Fedor Protar when he became an American citizen, sometime between 1881 and 1893. Protar's first name has been variously spelled; on his tomb, it is spelled Feodora, and in various published works, Feodor.

At Westward, beside a narrow, private lane is FEDOR PROTAR'S TOMB, 0.7 m., erected in his honor by the people of the island. The tomb, although open at the top, has the appearance of a stone mausoleum. In the rough stone wall, a neat frame gate gives entrance to the grave, on which flowers and small shrubs have been planted. Across the road from the grave is a small white cross, set up by Protar to mark the spot where an engineer of the old railroad was killed.

At the junction, the main route turns southward (L) through a heavy growth of timber, one of the wildest parts of Beaver Island.

The junction with a narrow side road is at 4.7 m.

Right on this road 1 m. to a fork and R to CROSSES BLUFF, 1.2 m., one of the highest elevations on the west coast. The summit of the bluff commands a sweeping vista of Lake Michigan and of High, Gull, and Trout Islands. A clearing in the woods below marks the site of old Peshabetown, once a populous Indian Village. Winds and rains have eroded the face of the bluff; the outer edge is unsafe.

The main highway traverses woodlands, continuing southward to an east-west road at 7.5 m.

Just south of the junction is FOX LAKE, which affords excellent fishing. A steel fire tower at the north end of the 100-acre lake offers an over-all view of the island. East of the lake is a marsh, heavily overgrown with large huckleberry bushes, where the islanders pick their annual supply of berries.

The main route turns R. to a fork at 7.8 m. and then L.

The OLD LUMBER CAMP, 10.1 m., of the Maple Block Company was rebuilt by the Antrim Iron Company in 1937, as one of their bases for renewed lumbering activity on the island (*see Antrim, Tour 14a*). The camp now includes a company store and comfortable cabins, which house the families of woodcutters.

From the IRON ORE BAY DOCKS, 13.9 m., lumbermen once shipped logs and other products. A boat loaded with iron ore was wrecked near the entrance of the bay, and some of the ore later washed ashore, covering the beaches in many places. Because of this incident the bay was given its present name.

The IRON ORE BAY LIGHTHOUSE (*open daylight hours*), 15 m., erected in 1851 and rebuilt in 1891, surmounts a high bluff at the southern tip of the island. The light guides shipping through the channel between Big Beaver and North Fox Island. As a further aid to vessels, a huge foghorn has been installed. The station is in operation between the opening of navigation and December 15.

The route traverses the southern shore of the island, with the waters of Lake Michigan appearing on the right and a beautiful growth of

cedar, balsam, birch, and spruce on the left. At 18 *m.*, the road swings away from the water and proceeds through a thick patch of woods.

At 18.5 *m.* is a junction with a narrow country road.

Left on this road to LAKE GENESERATH (*boats for hire*), 0.1 *m.*, largest of the island's lakes and formerly the favorite vacationing place of King Strang. The lake is a popular recreational center. The principal development lies on the eastern shore near the outlet, though cottages and summer homes are being built at other points. Besides fish indigenous to Beaver Island, Lake Geneserath contains a few small-mouthed bass imported from Hog Island by the State department of conservation. Much of the shore line is level and sandy.

NOMAD, 20.1 *m.*, on the shores of McCauley's Bay, is a popular cottage and summer-home settlement. Here also is Cole's Sawmill, which manufactures lumber and shingles for shipment and does custom work for islanders.

From Nomad, the highway runs north along the east coast, with Lake Michigan constantly in view (R). This shore-line drive, stretching for several miles, provides many scenic vistas.

At 25.2 *m.* the route turns L. on an improved county road, through a heavy growth of timber. It turns R. at 26.3 *m.* on Kings Highway to cross the River Jordan, 26.5 *m.* Beside the river is the SITE OF AN OLD MILL (L) that ground the Mormons' grain and sawed their lumber. The site is overgrown with young timber.

At 27.8 *m.* is a junction with an improved road.

Right on this road to BIG SAND BAY, 1.5 *m.*, a long, sweeping curve of beautiful white sand, the most popular swimming place on the island. Near by is a small cabin settlement.

The King's Highway passes the ruins of old Mormon farms and present-day rural settlements.

The only landing field of the Beaver Archipelago is at 31.2 *m.*

Just north of the field, at 31.3 *m.*, is an improved county road (*for road westward, see above*).

Right on this road the HOLY CROSS CHURCH AND CONVENT, 0.1 *m.*, founded in 1863 by Roman Catholic priests who accompanied the Irish emigrants. The various structures are modern and well kept. Standing before the white church is a two-story rectory on an attractively landscaped lawn. On the churchyard grounds are a cemetery and the CHURCH HILL WEATHER TOWER, which serves local fishermen and lake steamers. The tower is operated by the priest of the Holy Cross Church, who receives weather reports from the U. S. Coast Guard. During daylight, this information is transmitted to lake traffic by flags; lights are used at night. The eyes of islanders are frequently turned toward the tower, for almost every family has one or more members employed in commercial fishing.

The King's Highway continues north into ST. JAMES, 32.3 *m.*

Isle Royale

Transportation: Boat service from Eagle Harbor and Copper Harbor, Mich. (see *Tour 20*), Duluth, Minn., and Port Arthur, Ont., Canada, during navigation season. Vessels, schedules, and rates subject to seasonal changes. No highways on Isle Royale; storage facilities for automobiles at ports.

Accommodations: Summer hotels at Rock Harbor, Tobins Harbor, Belle Isle, Washington Harbor, and Chippewa Harbor. Free camp sites at all points; campers must furnish own equipment and food.

Temperatures: Temperatures range from -26° in winter to 65° in summer.

ISLE ROYALE, cliff-bound and copper-lined, the largest island in Michigan waters, lies like a battleship at anchor in the northwestern part of Lake Superior. Nearer the Canadian shore than the American, the island is within a right-angle turn of the international boundary, a turn that marks a deviation from the centerline placement of the boundary on all lakes and connecting waters between the Atlantic seaboard and western Lake Superior.

Isle Royale is 44 miles long and between 3 and 9 miles wide. Its surface is broken by parallel ridges from which rise Mount Franklin, Mount Lookout-Louise, and several other lava peaks. Strewn among the peaks are sea stacks (rock pillars), such as Monument Rock, marked with terraces and pitted with caves. Similar markings at approximately the same elevation on the mainland of Canada and the United States indicate that Lake Superior was once much larger than it is today.

Isle Royale's rugged irregular coast line affords excellent harbors, most important of which are Rock Harbor at the northeast, regarded by marine authorities as one of the best ports of anchorage in the Great Lakes, and fiordlike Washington Harbor at the southwest. The largest of the coves and inlets is Siskiwit Bay, on the southeastern shore.

The surrounding waters are studded with innumerable atoll-like reefs and small islands. Government lighthouses are maintained on Rock of Ages, at the southwestern tip of the isle, on Menagerie Island, at the south, and on Passage Island, at the east, one of the most important lights in Lake Superior. At the western entrance to Rock Harbor stands a lighthouse last used as such in 1858; today, the home of a fisherman, it is regularly visited by excursion boats throughout the summer.

Its severe winters and inaccessibility have kept Isle Royale in a

semiprimitive condition. No towns or cities rise from its shores; no farms checkerboard its surface. The interior, watered by a few clear lakes and streams, is heavily wooded and well stocked with wild life. Fishing and boating are the most popular sports, but the more venture-some vacationists tramp through the woods or stalk and photograph wild life. Some of the resort hotels have tennis courts; a small golf course occupies the site of an old Hudson's Bay Company trading post.

In general, only a thin mantle of soil and glacial overburden covers the ledge rock of the island, which consists of a series of ancient lava flows with interbedded conglomerate and sandstone. These all dip southeastward into the lake, from which they again emerge on Keweenaw Point, the northernmost reach of the Upper Peninsula. They are thus part of the State's famed copper-bearing formation, but, although the range has produced 8,000,000 pounds of copper, only 1,000,000 pounds have come from Isle Royale.

The long points and reefs are composed of the harder parts of the underlying formations; the fiordlike bays and basins of the inland lakes have been carved from the softer portions by erosion. Various minerals of economic and scientific value are found in the cavities of the porous frothy tops of old lava flows. These include metallic copper and, more rarely, silver; agates, thomsonites, and greenstones turn up on the beaches, after weathering has freed them from their less-resistant matrices.

The spruce and balsam forests of Isle Royale are lumbered for pulpwood and 'shortstuff'—railroad ties and fence posts. Owing to the thin soil, the island's trees never attain the size of those on the mainland; shallow-rooted, they are easy prey to the gales that roar in from the lake. Most of the common trees, with the exception of beech and hemlock, grow here, including fine groves of white and black birch. Forest fires are extremely hard to check because of the rough, rocky terrain and the mosses that fill many cracks in ledges, holding fire in dry seasons for days. In 1936, fire developed in the lumbering section and swept nearly one-third of the island before it was brought under control.

Isle Royale's beauty is greatly enhanced by a variety of wild flowers. Bluebells and common violets appear in early spring. Summer brings dogtooth violets, white daisies, jack-in-the-pulpits, and countless other species, including more than 30 varieties of wild orchids. Poison ivy and poisonous snakes are not among the flora and fauna of the island. Its bird life consists largely of waterfowl. The forlorn cries of gulls resound along the rocky shore during the day; the eerie, high-pitched laugh of the loon echoes over the inland lakes at night. Wild geese and ducks feed on the lakes throughout the warm season, and coot, sanderling, and plover are among the animal migrants. The noise of screeching waterfowl is varied by the trills of robins and warblers, the chirps of winter wrens, and the staccato tapping of the red-headed and downy woodpeckers. The birds have nothing to fear

at the hands of man, for no hunting is allowed on the island; but the red-shouldered hawk, a summer visitor, the eagle, and the great horned owl prey on the smaller birds and rodents.

The antlered moose is the most spectacular animal on Isle Royale. These huge beasts, standing 7 feet high and weighing more than 1,000 pounds when full grown, have been here since 1912, when a few of them came 14 miles over the ice from the Canadian shore and were stranded by the spring thaw. No accurate count has been made of the present herd, but it is certain that the animals number several hundred—one of the largest herds in the United States. The State department of conservation live-trapped 11 moose and shipped them to the mainland in 1935. In the following year, 38 more were transported to various State game refuges and forests. Coyotes are the next most numerous of the wild animals; although their howls are occasionally heard on clear nights, they avoid human habitations. Mink, rabbit, beaver, muskrat, and weasel abound. The caribou and white-tailed deer that once inhabited the island have disappeared.

Since fishing, unlike hunting, is permitted, Isle Royale is a rendezvous of sports fishermen. The inland lakes teem with pike, perch, and pickerel; the streams are astir with trout; and the 'big lake' offers Great Northern pike and mackinaw trout. Commercial fishermen net satisfactory catches of whitefish in the deeper waters.

Although Isle Royale has never 'caught up with civilization,' it has been frequented by man since prehistoric times. It was probably the first place in North America where copper was mined, but it seems unlikely that any vast quantity of the metal was transported across Lake Superior in frail prehistoric craft. The deposits were worked by alternate applications of fire and cold water, causing the rock to crack, so that small particles of copper could be pounded out with stone hammers. Fragments of these crude tools have been found near the mines, the only prehistoric implements that have been discovered on the island. The many theories concerning the racial identity of these ancient miners range from the Phoenicians through the Indians to the roving Norsemen.

The first known white man to visit and describe Isle Royale was Etienne Anton Brulé, who was active among the Indians of the region in the early seventeenth century. Jean Nicolet's report on Isle Royale in 1634 created a considerable stir in Paris and Montreal, for he wrote that 'gold, rubies, and precious stones are found in abundance.'

Isle Royale became an American possession, it is said, on the tail of Benjamin Franklin's kite. Franklin, who helped negotiate the Treaty of Paris (1783), obstinately insisted that the island should be included in the territory of the United States. He had heard tales of the rich copper deposits and, because of his electrical experiments, foresaw a day when the new Nation could make good use of the metal. The international boundary was set north of Isle Royale by the Webster-Ashburton Treaty of 1842.

Until 1842, Isle Royale was in the hands of the Ojibway, who finally ceded it to the Federal Government. Commercial mining was begun in 1846 and continued intermittently until 1883. As late as 1872, copper pits 50 feet deep were found on the island. Nevertheless, the deposits did not compare well enough with those on the mainland to allow Isle Royale operators to compete successfully, and the tremendous Keweenaw development of the late nineteenth century forced complete abandonment of the island's mines.

During its mining days, several hundred persons lived on the island, but today only a few trappers remain during the winter. When navigation opens in the spring, commercial fishermen make their headquarters here until late autumn. Cottages and resort lodges reopen and summer visitors begin coming early in the season.

Isle Royale is part of Keweenaw County, the seat of which is 45 miles distant at Eagle River (*see Tour 20*). In 1931, Congress designated the isle as a national park. Although 97 per cent of all private claims had been cleared up by 1938, Isle Royale was not under National Park Service administration until the summer of 1939.

POINTS OF INTEREST

Points of interest on Isle Royale can be reached by boat, on foot over moose trails and footpaths, or by combinations of the two. There are no roads on the island, no automobiles, no carriages, or saddle horses.

MOUNT LOOKOUT-LOUISE (510 alt.), 3 miles from the northern end of the isle and $\frac{1}{4}$ mile inland from Tobins Harbor and Duncan Bay, is one of the highest points on the island. On a clear day, the Canadian mainland, 18 miles distant, is visible from its summit, which can be reached by safe trails.

MONUMENT ROCK, $\frac{1}{8}$ mile southeast of the base of Mount Lookout-Louise, is a good example of the numerous sea stacks, or rock pillars, carved as the island emerged from the glacial lake.

MOUNT FRANKLIN, 7 miles from the northeastern tip of the island and 1 mile inland from each shore, is accessible by footpath. Its peak affords a comprehensive view.

MOUNT OJIBWAY is 8 miles from the northeastern tip, southwest of Mount Franklin.

AMYGDALOID ISLAND, $\frac{1}{2}$ mile north of Belle Isle, on the north shore, is a long, narrow barrier that protects the entrance to Robinson Bay. The island is named for the formation that arises along the north shore and extends well into the waters of Superior. Amygdaloid is a fusion of volcanic pebbles and rock resembling peanut-brittle candy.

The old **MINONG MINE**, one of the copper workings of the late nineteenth century, is 16 miles from the northeastern tip of the island and $\frac{1}{4}$ mile inland from the north shore opposite Hawk Island. The road-bed of an old narrow-gage railroad leading from the mine to the shore is still visible.

Evidences of an old INDIAN CAMP and prehistoric mine workings are near the northern shore at Todd Harbor, midway between the two tips of the island. A footpath leads from the shore of Todd Harbor to Siskiwit Lake, largest of the isle's 24 lakes.

THOMSONITE BEACH, 7 miles southwest of Todd Harbor, on the northern shore, yields many semiprecious zeolitic stones. This is one of two places in the United States where thomsonite is found. It usually occurs in masses of a radiated structure and, in pure form, is snow-white. A trail from the beach leads inland to the shore of Lake Desor.

PREHISTORIC MINES are 10 miles southwest of Thomsonite Beach, about 1 mile inland from the north shore and about $\frac{1}{4}$ mile in from the tip of Washington Harbor.

MOOSE WALLOWS, reached by foot trails from the south shore at various points, are watering and resting places for moose. The animals can be observed safely from points near the edges of the wallows.

At the tip of the southern arm of the Middle Island Channel entrance to Rock Harbor is an OLD LIGHTHOUSE, now the residence of a fisherman. The lighthouse can be reached by boat, and visitors are welcome.

Northeast of the Middle Island Channel entrance to Rock Harbor is CEMETERY ISLAND, used as a burial ground by the miners who worked the copper mines in the last half of the nineteenth century.

Near the southern shore, 3 miles from the northeastern tip of the island and a short distance inland from Rock Harbor, is the SAGINAW MINE, also called the ICE MINE, because ice that forms in the shaft stays the year around; the mine has been used by the islanders as a means of refrigeration.

On Mott Island, largest of the islands in Rock Harbor, is GREENSTONE BEACH, on which greenstones, agates, and other semiprecious stones are found. Isle Royale is the only known source of greenstone, properly called chlorastrolite, in North America. It also occurs on the southern shore of the southern arm of Tobins Harbor.

Mackinac Island

No automobile permitted on the island.

Ferry Service daily: St. Ignace· 6 round trips by steamboat, 8 round trips by speedboat; 50¢ one way, 75¢ round trip, tickets interchangeable. Mackinaw City. 5 round trips by steamboat, connecting with all trains on railroad pier, 2 speedboat cruisers, 8 round trips each, 60¢ one way, \$1 round trip, all tickets interchangeable Cheboygan one round trip, \$1.

Sight-seeing Boat Trips: Daily excursion to Les Cheneaux (the Channels, locally called the Snows) with 9 stops, 4½ hours, \$1 50 Speedboat cruisers around the island, \$1. Special night excursions to St. Ignace announced during season. Speedboats may be chartered for special trips.

Air Trips: Air trip around the island, \$1 50. Plane may be chartered for special trips.

Yacht Facilities: Mackinac Island State Park Commission Pier, slips for yachts and motor cruisers, rates, first 3 days each season (cumulative) free, 50¢ a day for small craft to 75¢ a day for boats of more than 60 ft.; weekly and season berth rates; ice and water supply, garbage disposal, patrol service, and laundry service available. Anchorage for all types of craft in the harbor

Carriage Drives: Combination Drive, \$2 each person; Park Drive, shorter than Combination Drive but including many of its points of interest, \$1 50 each person; Shore Drive, duplicating parts of other two drives, \$2 each person.

Accommodations: Accredited hotels and rooming houses, European and American plan, from \$1.50 to \$8 daily; information concerning hotels, private homes, and cottages at Information Booth, Steamship Pier, or by mail from Mackinac Island Travel Bureau; restaurants, coffee shops, and sandwich counters available in the settlement.

Tourist Information Service: Information Booth, Steamship Pier; Carriagemen's Association Booth, Huron and Astor Sts. (downtown); Mackinac Island Travel Bureau (for mail inquiries), Headquarters Office, Fort Mackinac.

Motion Picture Houses: 2.

Golf: Grand Hotel golf course, public, near downtown area, 9 holes, greens fee, \$1 50 a day, Wa-wash-ka-mo Country Club, semipublic, 1½ miles, 9 holes, greens fee, \$1 50 a day.

Swimming: Grand Hotel outdoor swimming pool, 50¢; swimming facilities available in the harbor, but not recommended because of low water temperature.

Tennis: Fort Mackinac tennis courts, public, no charge. Hotel courts available only to guests.

Bicycling: Bicycles available for touring island, 35¢ an hour. 3 stations. (Inquire Carriagemen's Association Booth).

Riding: Saddle horses available at Powers Riding Stable and Chicago Riding Academy, both on Market St.; \$1.50 first hour, \$1 each hour following. 30 miles of sawdust and tanbark riding trails available. Riding lessons extra. Sunday night moonlight ride around the island, \$1.50.

Playgrounds: Children's playground at Fort Mackinac (*adm. free*).

Annual Events: Yacht races, Chicago and Port Huron to Mackinac, middle July. Hackmen's Ball, late Aug.

MACKINAC ISLAND, rising out of the Straits of Mackinac between Lake Huron and Lake Michigan, annually attracts thousands of tourists and resorters. Seen from the deck of an approaching steamer, the green hills upthrust from blue waters form an unforgettable sight. As the boat nears the breakwater, large summer houses come into view, with the barely discernible settlement flanked by the white bastions of Fort Mackinac, a green golf course, and the Colonial façade of the Grand Hotel.

In the harbor, named Haldimand Bay in honor of Sir Frederick Haldimand, British general and governor of Quebec during the American Revolution, various types of craft lie at anchor. Small sailing craft and power boats sway near shining luxurious yachts, and the larger lake steamers tie up at the dock to discharge sight-seeing passengers. Outside the harbor pass long, slim-hulled lake freighters and, occasionally, chunky sea-going ships from Norwegian ports, on their way through the narrow channel between Mackinac and Round Island, on the southeast.

Mackinac Island, with rolling green slopes, colorful gardens, and fine views of the harbor and surrounding waters, has been described as a modern summer resort in a horse-and-buggy setting. Composed of rock, it is free of swamps, mosquitoes, and polluted waters; no irritant pollens plague hay-fever sufferers; asthma victims find welcome relief here. The old fortress broods on the heights above the city as it did in the days of the fur traders. White false-fronted buildings, bulging upon the single paved street, contain curio and souvenir shops, restaurants, and sandwich counters. Swift-trotting teams and rubber-tired carriages throng roads that have never known the hum of automobile traffic. Brightly painted basket buggies and two-, three-, and four-seated vehicles of the 'eighties and 'nineties stand ready to take visitors on leisurely sight-seeing tours.

One of the customs of Mackinac is the carriage line, a system evolved by the Carriagemen's Association to insure rotation of favored positions for each of the 50 or more licensed carriages. The line forms down the center of the street, with traffic lanes on either side. Each day's positions are posted by license number on the bulletin board of the association, and drivers are required to be in position by eight o'clock in the morning. On summer afternoons, while awaiting the arrival of a steamer, the drivers often leave their vehicles along Huron Street and start a dice game. Participants squat on the walks, completely absorbed by the click of the ivories, while two or three of their friends 'keep an eye out' for the police. The dice are passed around the ever-growing circle, until the scream of the approaching steamer's whistle breaks up the game with even greater dispatch than could the law. When the boat docks, each driver is at his place, beside restless horses and shining buggy, greeting the visitors with humorously persuasive hawking, in which he enumerates the unsurpassed beauties of the island and the peculiar merits of his own team or carriage.

Mackinac Island rises from the Straits on six terraces. Geologic

evidence in the rock formation suggests that in ancient times the island was entirely covered by an inland sea. As the waters receded, the rocky limestone pinnacle haltingly emerged, until the Great Lakes reached their present levels. The action of the sea wore away the less resistant parts of the rock, resulting in such natural wonders as Arch Rock, Scott's Cave, Chimney Rock, Sugar Loaf Rock, the Devil's Kitchen, and others. The eastern and southern shores of the island were once overshadowed by huge limestone cliffs, some portions of which gradually broke away, while others softened, making possible the growth of pine and cedar. The thin top soil is not conducive to farming. A host of natural springs gushing from the limestone compensates for the absence of lakes or rivers on the island.

The island was called Michilimackinac (the great turtle) by the Indians, who believed it had arisen from the Straits through supernatural causes. Time and usage shortened the term to Mackinac. Because of its position in the Straits, the island was a natural gathering place for nomadic Indians, a point of intertribal exchange, and a refuge for tribes fleeing before the conquering Iroquois.

The first white man known to have explored the Mackinac country was Jean Nicolet (1598-1642), who canoed through the Straits in 1634 while seeking a waterway to the Orient. For almost a half century after Nicolet's voyage, the rocky cliffs of Mackinac were passed by fur traders, *voyageurs*, explorers, and missionaries. In 1670, the first reference to the 'Island named Michilimackinac' was made by Father Claude Jean Allouez in a letter to his superior, Father Claude Dablon, who spent the winter among the Huron Indians on the island. Father Jacques Marquette (1637-75), who founded a mission at St. Ignace in 1671, visited Mackinac, as did Robert Cavelier Sieur de la Salle (1643-87), who passed here in 1679 in the ill-fated *Griffon*, the first commercial sailing vessel on the Great Lakes.

From the beginning of French supremacy in the Northwest, the entire upper lakes region was designated as the Province of Michilimackinac, a term that in later years became the 'Mackinac country.' Continual warfare among the tribes, in which the French sided with the Huron and Ottawa against the Iroquois, kept the region in a state of turmoil. Before the arrival of the *Griffon*, a fort with a small garrison had been established by the French beside the mission at St. Ignace (see *St. Ignace*), and this settlement became the focal point for fur trade in the Northwest Territory. In 1701, the commandant, Antoine de la Mothe Cadillac, moved the garrison to Detroit, and the settlement and mission at St. Ignace were abandoned.

Fearing that the English would monopolize the fur trade, the French stationed a garrison on the southern shore of the Straits, where Mackinaw City now stands. From this vantage point they ruled the Mackinac country until the French and Indian War (1756-63). The victorious British transferred their garrison from 'Old Mackinaw' on the mainland to the more strategic Mackinac Island in 1781. For 20 years the island was the stronghold of the Straits. Kenneth Roberts, in his novel,

Northwest Passage, attaches the following importance to Mackinac, with Major Robert Rogers, Governor of Michilimackinac, as the speaker: 'It's the bottleneck of the Great Lakes. There isn't a mosquito anywhere near . . . Every pelt that comes from the northwest and every package of goods that goes there, has to pass through Michilimackinac.' In another part of the book, the island is described as 'a fortress between two empires—the white man's empire to the east, and the red man's to the west.' At the end of the American Revolution, Mackinac was ceded to America by the terms of the Treaty of Paris (1783); but the English refused to evacuate the post, and it was not until the signing of the Jay Treaty (1796) that they moved to St. Joseph's Island in upper Lake Huron.

Competition in the rich fur trade proved a constant irritant between the English and Americans in the Mackinac country. When the War of 1812 was declared, the British on St. Joseph's Island amassed a force of 1,000 soldiers, Indians, and trappers, landed secretly at night on the western side of Mackinac, and mounted two cannons on the promontory above the American fort. News of the declaration of war had not reached the island garrison, which was totally unprepared for an attack. Accordingly, Lieutenant Sinclair, commander of the fort, realizing that his 57 men could not hope to repel the strong enemy force, surrendered to the British commander, Captain Charles Roberts.

The Americans strove to recapture the island in 1814, with a formidable fleet and a land force of 750 men. Attempting to duplicate the successful tactics used by the English in 1812, they disembarked at British Landing and proceeded to the clearing known as the Early Farm. Here the American columns were routed by a mixed company of whites and Indians. Among those slain was Major Andrew Hunter Holmes.

After this decisive defeat, the Americans tried different tactics. Two war ships, the *Tigress* and the *Scorpion*, were assigned to blockade the island, thus choking off the defenders' food supply. The blockade proved effective, until the British executed a daring counter stroke. One dark night 70 British soldiers in rowboats stealthily boarded the *Tigress* with the help of ropes and scaling ladders, overpowered the crew, and captured the vessel. Two days later, the *Tigress*, manned by its captors but still flying the American flag, drew alongside the *Scorpion* at daybreak, opened fire with heavy guns, and demolished the second American boat. This victory cemented British control in the Mackinac country until news of the signing of the Treaty of Ghent (December 1814) reached America, ending the war in 1815. When hostilities ceased, the English withdrew from the island, and the Americans once more occupied the fort that they had been unable to capture by force.

One result of the war was American monopoly of the fur trade in this and other regions, for the Federal Government henceforth prohibited foreign countries from trading pelts on United States soil. Realizing the vast importance of this decree to fur trading, John Jacob

Astor centered the activities of his American Fur Company (chartered in 1808) at Mackinac Island in 1817.

The peak of the Mackinac fur-trading industry came in 1822, when pelts valued at \$3,000,000 were cleared through the Astor Company's post, which seasonally employed 2,000 *voyageurs* and 400 clerks. In winter, Mackinac, inhabited only by agents and a few soldiers, was as quiet as an isolated mission; but in July and August, with the return of the trappers, Indians, and traders, the wilderness settlement plunged into raucous life. During French occupation, the trading season had been ushered in with a certain formality and pageantry, purposely employed to impress the Indians and indulge their love for ceremony. The English and Americans, however, wasted no time on such ostentation. They traded with the natives singly or in groups at any time of the year, and sent out *voyageurs* who served the dual role of trappers and buyers of pelts.

The Mackinac post of the American Fur Company had a quadrangle and barter room in which most of the buying and collecting was done; in the rush season, clerks were stationed in other buildings and booths on the grounds to expedite the transactions. In these quarters the peltries were examined and paid for, after considerable haggling over price and quality with each individual seller. After the skins had been thoroughly dried, they were beaten, to expel dust and vermin, and then sorted, counted, and repacked in the warehouse for shipment. A hundred skilled men were employed during July and August to grade the pelts according to size, fineness of fur, and shades of color.

The fur-trading group at old Mackinac represented a racial cross-section of upper North America at the opening of the nineteenth century. As many as 3,000 Indians sometimes camped along the beach, their wigwams often two and three rows deep. Woodsmen of various nationalities slept in tents and stables or, wrapping themselves in pack bedding, spent the night in the open. Clerks and *voyageurs*, adventurers from the leading European countries, were quartered in tents, barracks, and the agency house. The American soldiers, of equally varied stock and lineage, occupied the fort and served as guardians of the frontier. *Coueurs de bois*, unattached woodsmen who worked spasmodically, lived in a constant state of debauchery while their funds lasted and their credit remained stable. All of the frontiersmen lived a rough adventurous existence, punctuated by drunkenness, brawling, and not infrequent murders. Dances and banquets were given for traders on their return from the wilderness, and invariably the merry-making lasted until daybreak. The man or group thus honored would return the courtesy the following night. This round of activities, wealth of characters, and constant bustle made Mackinac an exciting and picturesque settlement during its heyday as a trading post. But, after 1830, the fur trade declined, and, when Astor closed the company's office on Mackinac, the island populace gradually diminished, leaving only a few whites and Indians.

Its main industry gone, Mackinac was compelled to seek a livelihood

from other sources. The island was promoted as a resort center, and a number of wealthy Southern planters built summer homes here, but the Civil War wrecked their fortunes and the colony disappeared. After the war, the island attracted rich Chicagoans, and the resort movement was revived. Carriage drives were laid out in the late 1860's; roads were improved and grounds landscaped. In 1875, Mackinac was made a national military reservation. Ferry service was inaugurated in 1881. The island became a distribution and supply center, for the fishing and lumbering industries then booming along the near-by lake shores, and was so popular by 1887 that the huge Grand Hotel was built to accommodate wealthy visitors. The small remaining garrison was removed from Fort Mackinac in 1894, and the post was turned over to the State of Michigan. In 1895, the island (95 per cent of its area) was declared a State park.

CARRIAGE TOUR

Mackinac Island City—Fort Mackinac—Marquette Park—Arch Rock—Fort Holmes—British Landing—Mackinac Island City, 8 *m.*; the Combination Drive.

This route includes the major points of interest, though covering only a part of the many roads that crisscross the island. It passes reconstructed and preserved fortifications, natural phenomena produced in the limestone by ancient seas, and grassy slopes that once were bloody battlefields. The route winds through dense woods of cedar and hardwood, over occasional hills, and, on the return trip from British Landing, follows the shore line.

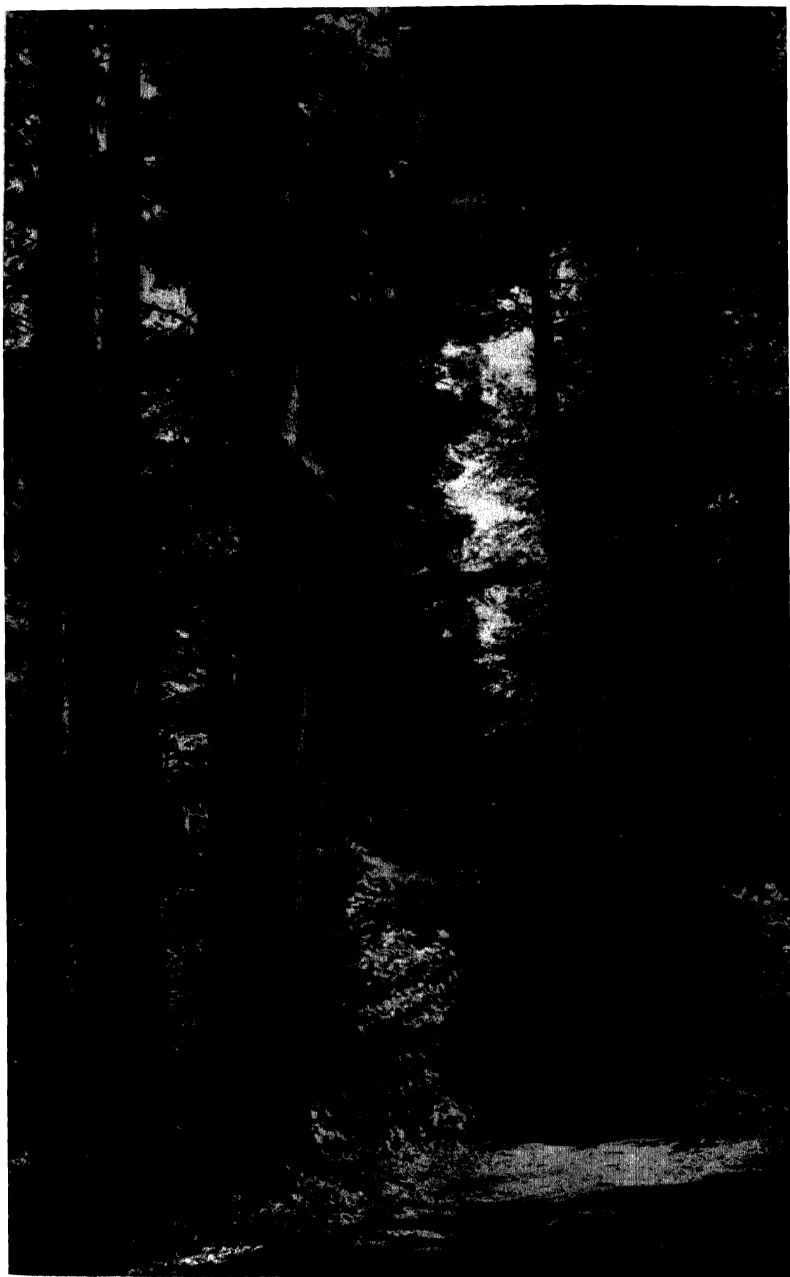
The focal point of the island's business and social life is MACKINAC ISLAND CITY (566 pop.), 0 *m.*

Old ST. ANN'S CHURCH (L), 0.4 *m.*, is marked by a bronze plaque commemorating the organization of the Parish of Ste. Anne de Michilimackinac in 1695. According to all available records, this was the first parish in the United States to be dedicated to the mother of the Virgin Mary. The church has had a varied history: one document states that in 1780, when Fort Michilimackinac was transferred from the mainland to the island, 'St. Anne's, the Roman Catholic church, was taken apart log by log and hauled over on the ice.' The present frame building, marked by a tower with belfry and spire, was erected in 1874. The records of the parish, reaching back to the seventeenth century, are valuable historical sources.

Half a block north of St. Ann's, the drive turns sharply L. and ascends a long steep hill, turning L. again near the summit; it continues along a bluff, lined with summer homes, which marks the first of the island's terraces. The city and harbor below appear momentarily before the view (L) is obscured by the cedars of SINCLAIR GROVE.

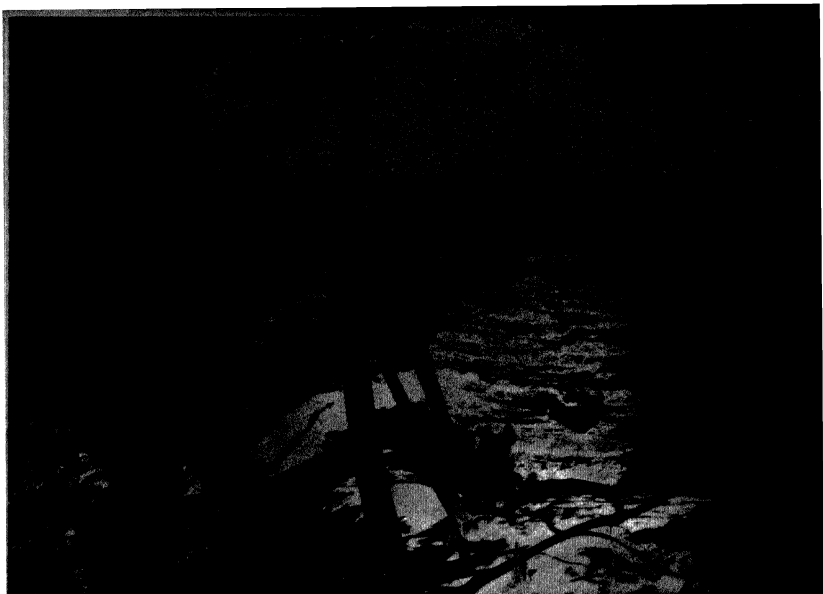
A small clearing at the turn of the road is CASS PARK (L), 0.6 *m.* The CASS MONUMENT, a cement shaft with a bronze plaque, was

In the Forests



Photograph by courtesy Michigan Department of Conservation

TRAIL THROUGH HARTWICK PINES STATE PARK

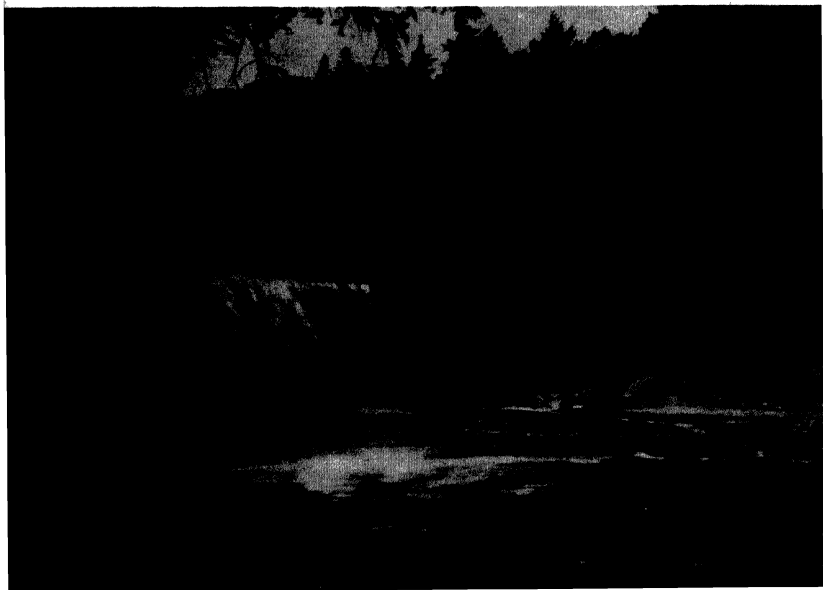


Photograph by courtesy Michigan Department of Conservation

PICTURED ROCKS NEAR MUNISING ON THE SHORE OF LAKE SUPERIOR

TAHQUAMENON FALLS, LUCE COUNTY

Photograph by Edward Dreier





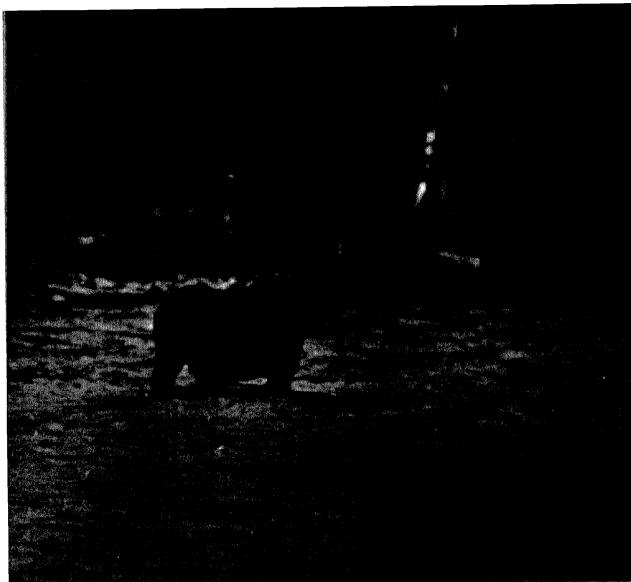
Photograph by courtesy of U. S. Forest Service

AU SABLE RIVER, HURON NATIONAL FOREST

Photograph by courtesy of U. S. Forest Service

AU TRAIN FALLS





BULL MOOSE

Photograph by courtesy Michigan Department of Conservation

BEAVER DAM AT HEAD OF MAPLE RIVER





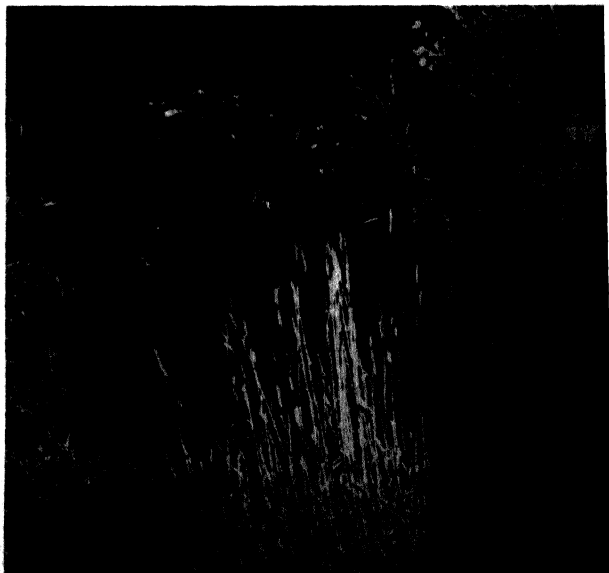
Photograph by courtesy of Dept. of Conservation
BEAVER



Photograph by courtesy of Laycock Photo Service
YOUNG BUCK FEEDING

'BRUIN'

A Flashlight Photograph by Ebb Warren



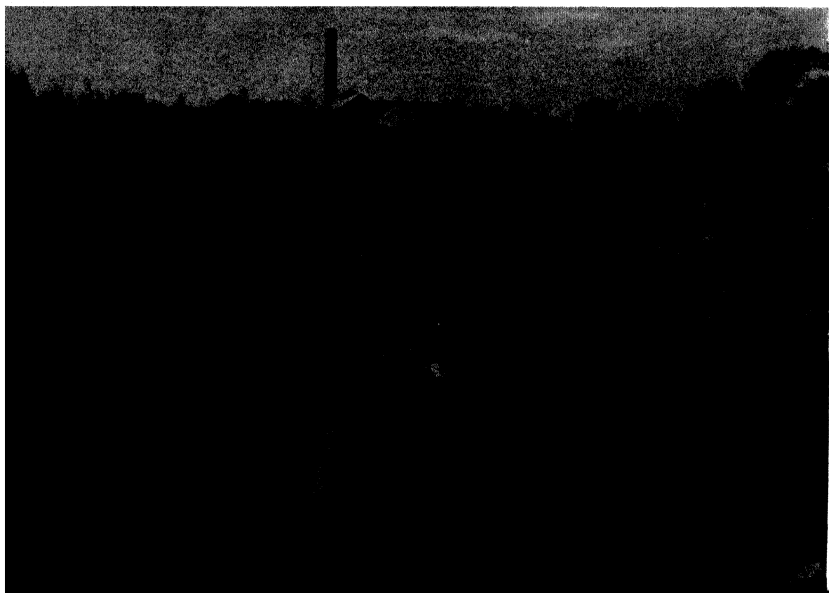


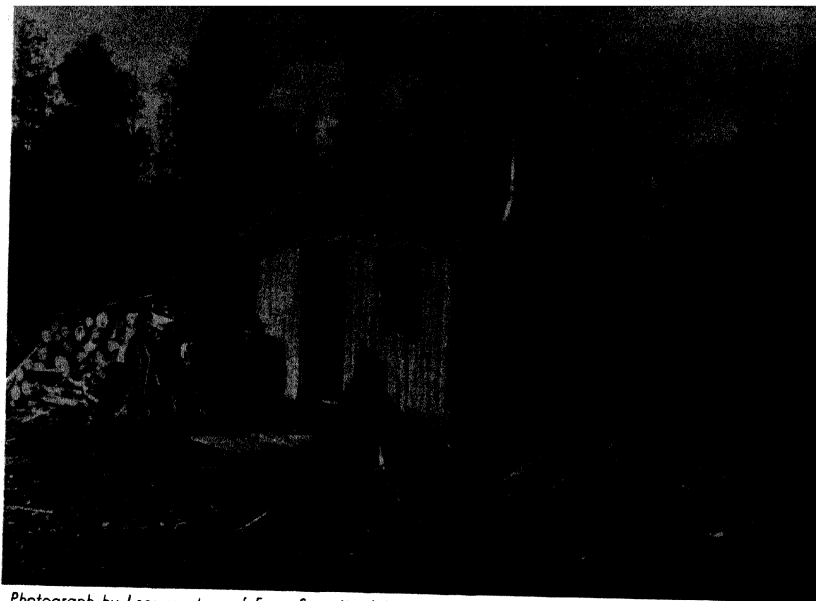
Photograph by courtesy of U. S. Steel Corporation

WORKINGS OF AN IRON MINE IN THE UPPER PENINSULA

QUARRY OF AN UPPER PENINSULA IRON MINE

Photograph by courtesy of Michigan Department of Conservation





Photograph by Lee; courtesy of Farm Security Administration

LUMBERMAN'S SHACK

AT THE SAWMILL





LUDINGTON STATE PARK

Photograph by courtesy of Michigan Department of Conservation

SKI JUMP AT THE KINGSFORD SLIDE, A WPA RECREATION PROJECT

Photograph by courtesy of WPA Information Service



erected in 1915 on Cass Cliff, in honor of Lewis Cass, governor of Michigan from 1813 to 1831.

Beyond Cass Park, the road winds past a thick growth of cedars, coming gradually to higher land on which maple, beech, and elm predominate.

ARCH ROCK (R), 1.3 *m.*, a rock bridge hanging above the eastern shore line, is reached by a footpath. The rock formation, 149 feet above the lake, with a span of 50 feet, appears from certain angles to be suspended in the air. According to Indian legend, the arch was formed by the Giant Fairies as a gateway to the island, but the more prosaic geologists explain that it was eroded in ancient times.

At Arch Rock is a winding log stairway.

Right on this (*on foot*) to the NICOLET MONUMENT, named for Jean Nicolet, who in 1634 passed through the Straits of Mackinac in a birchbark canoe, the first white man to enter Michigan and the Old Northwest. The monument is on a high point of the bluff known as NICOLET WATCHTOWER.

The route turns L. on Crooked Tree Road.

A pinnacle of limestone, SUGAR LOAF ROCK (L), 1.8 *m.*, towers 79 feet above the roadway and 284 feet above the surface of the lake. The rock, named for its conical shape, is pitted, as are other Mackinac Island limestone formations. From its summit is a sweeping view of green wooded hills and valleys, white rocky cliffs, and the blue waters of the Straits where they merge with Lake Huron. The Indians believed that Sugar Loaf was the wigwam of the spirit Manabozho, who re-created the world after the deluge and made his home here. Facing the road is an opening, referred to by carriage drivers as the DEVIL'S BAKE OVEN, large enough to admit several persons.

From Sugar Loaf, the route turns L. on Sugar Loaf Road, lined with thick woods, and cuts across the southeastern end of the MUSKET RANGE (R), 2.2 *m.*, a half-mile cleared swath, where the garrison of Fort Mackinac practiced marksmanship.

At 2.5 *m.*, the route turns R. on Garrison Road. From this point FORT MACKINAC (*see Foot Tour*) and the old PARADE GROUNDS are visible (both L). To the R., through a cleared stretch in the woods, which was used as the more recent RIFLE RANGE, may be seen the walls of FORT HOLMES; the upper story of the reconstructed block-house shows above the pickets.

At 2.8 *m.* is SKULL CAVE (R), a narrow aperture in solid limestone that widens into a cave large enough to permit a man to sit upright. The cave is also known as Henry's Hiding Place, for it was here that the fur trader, Alexander Henry, found refuge in his flight from the Indians, after the massacre at Fort Michilimackinac on the mainland during Pontiac's Conspiracy in 1763. Henry was guided to the cave at night by a friendly Indian and discovered the following morning that he had slept on a heap of human bones and skulls. Although several theories exist as to the origin of the bones, Henry believed that they

were the remains of Indian prisoners who had been sacrificed and perhaps devoured at war feasts.

The THREE CEMETERIES, 3 *m.*, have been described by a carriage driver as follows: 'Most of these graves are of doctors; the climate of Mackinac is so healthy, they all starved for lack of patients.' The first plat (R) is the old military burial ground, in which the majority of the graves are unidentified. To the R. also is the Protestant Cemetery, and to the L. the Roman Catholic.

Right from the Three Cemeteries on Fort Holmes Road to POINT LOOKOUT (L), 0.3 *m.*, from which the bald dome of Sugar Loaf is visible directly below, set in a speckled carpet of green that marks the foliage of the lower woods. To the north, on clear days, the St. Martin Islands appear as dark smudges on the lake horizon, and to the northwest are the many islands of Les Cheneaux.

Just beyond Point Lookout is FORT HOLMES (R), 0.5 *m.*, reconstructed in 1936 by the Works Progress Administration in accordance with the original design. It is situated on the highest point on the island, 325 feet above the waters of the Straits and 168 feet above Fort Mackinac, visible through a cleared space in the woods a half mile to the south. The fort is constructed of logs, with earth embankments ten feet thick in places. The entrance, facing east, is flanked by the storehouse and cook shanty, both sunk deep in the ground with only a few feet of the log structure showing above the earth. Within the U-shaped enclosure is the two-story log blockhouse. In a cleared space adjacent to the fort are public restrooms, a forest fire tower, and a 2,000-watt radio station, WHQ, built in 1908, the oldest in the Great Lakes Region.

Fort Holmes was an important factor in the fighting at Mackinac during the War of 1812. After capturing the island, the British enlarged the fortification and named it Fort George, to honor the reigning English monarch, George III.

At 3.5 *m.* is the junction with Crooked Tree Road, Annex Road, and British Landing Road.

Left on Annex Road, through woods and cleared areas, past summer cottages partly screened by cedars, to the junction with Cottage Drive, 0.5 *m.*; L. on Cottage Drive, between a row of magnificent summer homes on a terrace (L) and the bluff (R), to GRAND HOTEL (L), 1.5 *m.*, a four-story, 500-room summer hostelry, erected in 1887. Modified Colonial in design, with a long row of white columns enclosing the spacious veranda, the building presents a striking appearance. From the avenue, which passes in front of the 120-foot porch, the tea garden with a small dance floor is visible in a cedar-bordered clearing 100 feet below.

At the north end of the hotel on Grand Blvd. is the GRAND HOTEL GOLF COURSE. After passing the tennis courts (R) and the municipal baseball diamond (R), the road turns L. on Market St. and enters the settlement on Hoban St., 2 *m.*

From the junction the main route is straight ahead on British Landing Road, which leaves the woods and enters a large clearing known as EARLY FARM, where the Americans were ambushed in their attempt to recapture Fort Mackinac. A driveway (L) leads to the clubhouse of the WA-WASH-KA-MO COUNTRY CLUB, 3.8 *m.*, one of the two golf courses on the island.

The MACKINAC ISLAND BATTLEFIELD, 4 *m.*, extends both R. and L. from the road. On a green boulder set atop a small hill (R) is a bronze plaque commemorating the soldiers who died with Major Holmes, August 4, 1914.

DOUSMAN'S DISTILLERY (L), 4.7 *m.*, in operation at the time of the British occupation of the island, is marked by a small spring that once furnished water for the distillery.

A small cove on the northwestern side of the island is known as BRITISH LANDING, 4.9 *m.* Here the shore drops away abruptly to furnish a deep-water harbor. The British landed here in 1812, when they captured Fort Mackinac; and the Americans in 1814, in an attempt to recapture the fort. An old CANNON (L), mounted on a concrete base at the turn of the road, was erected in 1908 to commemorate the spot, which is known also as CANNONBALL.

From British Landing the road turns L. and follows the Shore Road. Along the shore the island's terrace formation is clearly illustrated; in places the cedar-covered and rocky heights rise almost vertically for more than 100 feet.

At 6.3 *m.* is CHIMNEY ROCK (L), a towering limestone pinnacle. From LOVERS' LEAP (L), 7 *m.*, according to legend, the ubiquitous Indian maiden jumped to her death, when she heard that her lover had been slain in battle. Said to have magic power in its icy water, WISHING SPRINGS (L), 7.1 *m.*, gushes from the limestone rocks. DEVIL'S KITCHEN (L), 7.2 *m.*, a smoke-blackened cave in the rock, is often used as a cookery by picnic parties.

East of Devil's Kitchen, the road parallels the BOARDWALK (R), 7.8 *m.*, for a short distance and reenters the settlement on West Huron Street. The Boardwalk, the western continuation of West Huron Street, is the island's main promenade.

FOOT TOUR

Mackinac Island City—Dwightwood Springs—Fort Mackinac—Astor House—Boardwalk—Mackinac Island City; 5 *m.*

One block northeast of Huron St. Dock, on Huron St., is MARQUETTE PARK (L), 0 *m.*, lying beneath the towering bastions of Fort Mackinac. During the military occupation, the site of the park was used as a garden plot by the garrison. In its center is MARQUETTE MONUMENT, a life-size bronze statue of Father Marquette. A small cairn in the southwestern part, erected in 1931, designates the island as 'Michigan's most historic spot.'

The COAST GUARD STATION (R), on Huron St. facing Marquette Park, was erected in 1915. The YACHT PIER (R), 0.2 *m.*, was built for the convenience of the numerous yachts and pleasure boats that stop here in summer. Huron Street, past the Yacht Pier, is lined with spacious cottages, hotels, and rooming houses.

At 0.4 *m.* is (L) ST. ANN'S CHURCH (*see Carriage Tour*); and at 0.9 *m.*, the OLD MISSION CHURCH (L), its square tower and shuttered windows reminiscent of a New England meetinghouse. Wide clapboards cover the exterior of the structure, built in 1829-30. The belfry, which contains the bell used to call worshippers to service since 1830,

has its original tin roof. The present congregation is composed of summer visitors and island residents.

A long, three-story hostelry, the OLD MISSION HOUSE (L), 1 *m.*, stands on a looping drive that branches from Lake Shore Boulevard. Built as an Indian school about 1825, it was transformed into a hotel in 1838.

North of this point the route follows a single-lane oiled road along the shore line. The limestone bluff rolls closer to the water's edge, overhanging the road with cedar. There is no beach along this stretch, the ledge rock breaking off abruptly into the black water.

Below the jagged ledge protecting PESHTIGO BEACH (R), 1.4 *m.*, from the open water, lie the rotting hull and keel of the *Peshtigo*, a lumber barge that was battered to pieces in the 1880's during a heavy storm. The EAST BLUFF (L), 1.6 *m.*, a bald, limestone outcropping overhanging the road, is also called Robertson's (or Robinson's) Folly. According to legend, it was here that Captain Daniel Robertson, commandant of Fort Mackinac, fell to his death while grappling with an Indian brave who had killed the captain's Indian wife.

From DWIGHTWOOD SPRINGS (L), 2 *m.* (*canopy for hikers*), rustic steps lead up a bluff, at whose summit the route turns L. and follows a well-defined footpath through the cedar growth back toward the village. At various places the trail touches lookout points that afford views of the route traversed below.

Right at the top of the stairs is a path along the bluff to ARCH ROCK, 0.4 *m.*, (*see Carriage Tour*).

Just beyond the springs is PARKMAN PROSPECT (L), 2.2 *m.*, a point on the East Bluff overlooking Lake Huron. The spreading boughs of the widely spaced cedars along the trail arch overhead, shutting out the sun's rays. The forest floor is free of underbrush. Occasional paths drop diagonally down the gentler slopes to Shore Boulevard below.

The FAMILY ROCKS (L), 2.4 *m.*, is a large outcropping of limestone, one of many precipitous drops along the route. Above the rocks, the path runs to the edge of the bluff, which looks out over the channel directly down on Peshtigo Beach, far below.

At STATE LEASE No. 2 (R), 2.8 *m.* (leased to private enterprise), the path leaves the woods and continues along a carriage road that serves a number of summer cottages above the harbor.

From CASS CLIFF (R), 3.2 *m.*, an excellent view may be had of the eastern residential section, the blue waters of the channel, and the green dome of Round Island. A wooden staircase descends the bluff to reach the level of Mackinac Island City (one block from Huron St.). The path enters SINCLAIR GROVE, a tract of pine and cedar named for Lieutenant Patrick Sinclair, first commandant of Mackinac. The ANNE TABLE (L), 3.3 *m.*, is a large bronze memorial to Constance Fenimore Woolson (1848-94), author of *Anne*, a romantic novel of Mackinac Island during the Civil War period.

On a towering bluff at the end of the path, as it leaves Sinclair Grove,

stands old FORT MACKINAC (L), 3.4 *m.*, overlooking the village. For years the principal fortification in the vast Northwest Territory, the stronghold was first occupied by the British and later by the Americans (*see above*). The fort's massive ramparts, of local limestone cemented in place with lime, are as sturdy today as when they were built by the British in 1780. The hand-hewn cedar pickets and iron spikes atop the walls are exact copies of the originals. The structures that comprise the fort include blockhouses, a fort school, now used as the office of the Mackinac Island State Park Commission, a guardhouse with its 'black hole' dungeon, officers' quarters that now house a museum, and a Coast Guard lookout.

Small gates in the northeast wall, on each side of the NORTHEAST BLOCKHOUSE, lead into the fort. Inside is the BEAUMONT MONUMENT (L), a granite memorial honoring Dr. William Beaumont (1785-1853), an American surgeon at Fort Mackinac. In 1822, Beaumont was called upon to treat Alexis St. Martin, a 19-year-old youth, who was suffering from an accidental gunshot wound; a large portion of his side had been blown away, exposing the perforated stomach. Dr. Beaumont cared for St. Martin in his own home for two or three years, but the wound in the abdomen would not heal. With St. Martin's consent, Beaumont took the opportunity to study the digestive process and, over a period of eight years, conducted some 200 experiments that revolutionized existing theories on the subject. At last, St. Martin recovered his health to such an extent that he was able to lead the hard life of a *voyageur*. Part of Beaumont's research was done in the POST HOSPITAL, the only one on the island, and the results of his study, *Experiments and Observations on the Gastric Juice and the Physiology of Digestion*, were published in 1833. Beaumont's work, carried out under crude and trying conditions, was thorough; modern science owes to him the discovery of pepsin and its gastronomic action.

The route leaves the fort at the SOUTH SALLYPORT, where concrete steps lead down to a ramp. The top of the ramp affords a fine view of Marquette Park, directly below, and the settlement and harbor. The ramp leads to Fort St., on which the route turns L. one-half block to Market St.; R. on Market St.

The ASTOR HOUSE (R), 3.8 *m.*, a long white-washed structure, served as headquarters of the American Fur Company, which had a monopoly on the fur trade in the Great Lakes region. Hand-hewn timbers were used in the construction of the buildings, and the window panes were made of locally fused glass. The buildings, now consolidated into one structure, consisted of a spacious three-story house in which the agent lived, a bunkhouse for employees, and a combination store and warehouse. Three vaults were built into a bank at the rear for the storage of money, whiskey, and ammunition.

John Jacob Astor sold his Mackinac holdings in 1834. Between 1850 and 1870, the former fur post was used as a boarding house. The separate structures were joined in 1870, additional guest rooms were built, and the whole contiguous unit served as a hotel until 1929. The

Astor House is now owned by the Mackinac Island Community Association, a group that is interested in restoring and preserving the buildings. A desk used by Ramsey Crooks, one of the principal agents in the old days, the fur-weighing scales, and two American Fur Company ledgers are on exhibition here.

Two riding academies on Market Street are passed within three blocks. The BLACKSMITH SHOP (L), 4 *m.*, shoes more than 1,200 horses during July and August.

The route turns L. at the Boardwalk (*see Carriage Tour*) and enters the commercial section of Mackinac Island along W. Huron St. At 4.4 *m.* is BIDDLE'S POINT (R), marking the southwestern extremity of Haldimand Harbor. The breakwater that stretches out into the channel from the point was constructed by the Federal Government in 1913.

PART IV
Appendices

Chronology

- 1611-12 Samuel de Champlain may have visited Michigan this early; or the honor may belong to his protégé, Brulé. His maps show connection between Lakes Huron and Erie, whether drawn from personal knowledge or report.
- 1618 Etienne Brulé passes through North channel at neck of Lake Huron. this same year (or during two following years) lands at Sault Ste. Marie, probably first white man to look upon the Sault. Michigan Indian population about 15,000.
- 1621 Brulé returns, explores Lake Superior coast, and notes copper deposits.
- 1634 Jean Nicolet passes through Straits of Mackinac, coasts along northern shore of Lake Michigan, seeking route to Orient.
- 1660 Father René Mesnard establishes first 'regular' mission, held throughout winter at Keweenaw Bay.
- 1666 Father Claude Allouez founds mission at Sault Ste. Marie—first permanent mission.
- 1668 Father Jacques Marquette takes over Sault mission, founds first permanent settlement on Michigan soil at Sault Ste Marie.
- 1669 Louis Jolliet, explorer-trader, stops at the Sault. Indian guides him down Lake Huron, through the strait (Detroit River) into Lake Erie—an eastward route not heretofore known to French (according to some historians. *See 1611-12 above*).
- 1671 May (or June) 14. Simon Daumont, Sieur de St Lusson, lands at the Sault, claims vast 'Great Lakes region,' comprising most of Western America, for Louis XIV.
St. Ignace is founded when Father Marquette builds mission chapel.
- 1671ca First of the military outposts, Fort de Buade (later known as Fort Michilimackinac), is established at St. Ignace.
- 1673 June 17. Jolliet and Marquette discover the Mississippi River.
- 1675 May 18. Father Marquette dies at site of (present) Ludington.
- 1679 May. René Robert Cavelier, Sieur de la Salle, builds the *Grifon*, first sailing vessel on Great Lakes.
August 12. La Salle enters lake which he names Ste. Claire; arrives St. Ignace, August 25; continues into Lake Michigan.
September 18. Preparing to continue southward, La Salle loads *Grifon* with furs and sends it on return journey. *Grifon* is lost with all hands, two days later, in severe storm on northern Lake Michigan.

- May 24. British transfer garrison from Michilimackinac to new fort on Mackinac Island.
- 1783 September 3. By Treaty of Paris, British forces are required to withdraw from all United States lands. (British remain in territory to become Michigan, however, for 13 years.)
- 1787 July 13. Congress passes Ordinance of 1787 (second Northwest Ordinance), outlining government of the 'Territory Northwest of the Ohio River.'
- 1788 First stage of American Territorial Government is established under Ordinance of 1787; intended to include Michigan territory, but no efforts made to oust British.
Four new judicial districts are created by Lord Dorchester, governor general of Canada, Michigan coming within new District of Hesse.
- 1791 November 4. Offensive forces under General St. Clair, sent against British-ally Indians in the territories, are defeated, rounding out two years of failure because of insufficient American forces.
- 1792 Late summer. Detroit (including settlements on both sides of river) holds first election, sending three representatives to Parliament of Upper Canada.
August 20. General Anthony Wayne decisively defeats Indians and allied British at Battle of Fallen Timbers.
- 1795 June 24. John Jay Treaty is ratified by Congress. British finally agree to relinquish all Northwestern Territory lands.
August 3. Treaty of Greenville (Ohio) is signed at first important Indian session
- 1796 July 11. British withdraw garrison from Detroit. Stars and Stripes is raised for first time on Michigan soil by Wayne's advance guard.
October. British evacuate Mackinac Island, moving to St. Joseph's Island, to the north.
- 1798 Father Gabriel Richard (1767-1832) comes to assist at Ste. Anne's, Detroit.
Second stage of American Territorial Government becomes effective.
- 1799 January 22. Territorial assembly convenes at Cincinnati, Ohio. County of Wayne (embracing all of Michigan territory) sends one representative, elected in first local (Michigan) election held under United States rule.
- 1802 May 3. Detroit holds first election following incorporation under act passed January 18 by legislative council at Chillicothe.
- 1803 February 19. Ohio is admitted to Union: accurate boundary lines in little-known Great Lakes country impossible—circumstance prepares background for Toledo War, 30 years later. Michigan under Territory of Indiana.
- 1805 January 11. Territory of Michigan is created, with Detroit as capital.
June 11. Detroit is completely destroyed by fire.

- July 1. General William Hull, first territorial governor, reaches Detroit. He and judges immediately assume control under 'Governor and Judges Plan,' Ordinance of 1787.
- 1805-6 Important commercial timbering begins, when sawmills are built on St. Clair River to aid in rebuilding Detroit.
- 1807 November 17. Treaty of Detroit: Chippewa, Ottawa, Wyandot, and Potawatomi tribes meet with General Hull.
- 1809 August 31. *Michigan Essay and Impartial Observer*, first newspaper, is printed by James M. Miller on press imported by Father Richard. Only few copies sold.
- 1810 Population, 4,762; slaves, mostly captive Indians, number 32. Methodist Episcopal Society is founded, first Protestant organization in Detroit and first permanent Protestant society in Territory.
- 1811 December 27. Memorial to Congress stresses defenseless position of Michigan and begs military aid against marauding Indians. Petition unsuccessful.
- 1812 June 18. United States declares war against England. Father Richard urges congregation to support American cause.
July 17. Fort Mackinac falls to British, who take advantage of President's inability to inform frontier immediately that war has been declared.
- 1812 August 16. Hull surrenders Detroit to General Brock without firing a shot. (Hull, later, is tried and eventually exonerated of cowardice.)
- 1813 January 22. At Battle of River Raisin, main body of Americans is forced to surrender, promised protection from Indian allies of British.
January 23. Massacre of the River Raisin occurs; Indians allowed to kill many white wounded and prisoners. This proves powerful factor in uniting American sentiment for repulsion of British in the West.
September 10. Perry is victorious on Lake Erie.
October 2-5. Harrison defeats Proctor's army in Canada: Tecumseh, famed ally of British, slain. Perry's and Harrison's victories end hostilities on northwest American border.
October 29. Harrison departing for Washington, leaves Colonel (later General) Lewis Cass as military governor at Detroit. Cass continues, under Presidential appointment as governor of Michigan Territory for 18 years.
- 1814 August 4. Americans make unsuccessful attempt to recapture Mackinac Island.
December 24. Treaty of Ghent ends War of 1812, British losing Mackinac Island (but occupying Drummond Island, to the north, for eight years).
- 1815 October 24. Governor Cass and judges adopt act reincorporating Detroit (city), restoring restricted municipal government.

- 1817 August 26. 'Catholepistemiad,' or University of Michigania, is incorporated—first university, as distinguished from college, in the United States.
John Jacob Astor establishes trading post at Mackinac Island, centering his fur-trading activities there.
- 1818 Public land sales begin at Detroit; immigration from East is under way.
March 31. Michigan's first Protestant church (Methodist Episcopal) is erected about seven miles from Detroit, near banks of River Rouge.
August 27. *Walk-in-the-Water*, first steamboat on Upper Great Lakes, arrives at Detroit on maiden voyage.
- 1819 September 2. William Woodbridge is elected first delegate to Congress from Michigan Territory: first time right to vote has been operative since General Assemblies of 1798-1799-1800.
September 24. By Treaty of Saginaw, Governor Cass obtains for United States about 6,000,000 acres of Michigan land, a cession that marks beginning of Indian exodus from Territory.
- 1820 Population of Territory, 8,096. Detroit, Mackinac, Sault Ste. Marie are largest towns.
June 16. Treaty at Sault Ste. Marie is concluded by Cass: Indians cede 16-square-mile tract on St. Mary's River for fort site, but reserve fishing rights (still in effect, 1939).
- 1821 August 29. Cass negotiates Treaty at Chicago, gaining from 'big three' nations—Chippewa, Ottawa, Potawatomi—all Michigan territory south of Grand River that had not previously been ceded.
- 1823 Spring. General Hugh Brady and soldiers construct Fort Brady at the Sault (Sault Ste. Marie, commonly referred to as 'The Soo'), ending supremacy of Chippewa. French and British trade-reign is finished.
March 3. Congress advances Territory of Michigan to second governmental grade, authorizing legislative council of 9 members presidentially appointed and 18 locally elected; enacted laws are subject to congressional approval.
December 8. Father Gabriel Richard (only priest ever to sit in Congress, as of 1940) takes office as territorial delegate to Congress (1823-5).
- 1824 April 30. On motion of Father Richard, Congress appropriates \$10,000 for survey of Great Sauk Trail (now US 112) between Detroit and Chicago; makes additional appropriation in 1825.
- 1825 October 26. Opening of Erie Canal facilitates settlement of Michigan and shipping of farm products to East.
Land values rise.
- 1828 April. Michigan's first capitol is completed (site Capitol Park, Detroit).
- 1830 Population, 31,639.
Severe depression strikes Michigan.

Fur trade reaches peak: subsequent decline leaves some regions without commercial activity.

July 31. Michigan issues first railway charter, to Detroit & Pontiac Railway: first incorporated railway in limits of old Northwest Territory.

1831 August 1. General Lewis Cass, appointed secretary of war by President Jackson in July, resigns governorship.

Stevens T. Mason, at age of 19, becomes acting governor—a post he holds several times during following four years.

1832 July 4. Seven-week cholera epidemic devastates Detroit: Belle Isle is used for quarantine.

September 13. Father Richard, priest, legislator, educator, dies of cholera, contracted while nursing the sick.

1834ca March. Territorial legislature petitions Congress for permission to form State government. Southern States protest admission of another free State; Ohio protests the boundary Michigan claims on the South; Congress refuses permission.

July 6. Second cholera epidemic at Detroit begins with death of Governor George B. Porter; wipes out one-seventh of population. Stevens T. Mason again becomes acting governor.

1835 Pioneers in Macomb and adjoining counties discover oil.

February 23. Ohio legislature passes act asserting claims to the 'Toledo strip,' along her northern boundary.

April. Governor Mason calls out militia: Toledo War begins, with more anger than gunfire. Border incidents continue into September, jurisdictional wrangling through all of 1836.

May 11. Convention at Detroit forms State constitution in preparation for statehood. Constitution of 1835 provides protection to individuals in Lockean Bill of Rights, incorporates educational recommendations of John D. Pierce and Isaac E. Crary.

October 5. State constitution approved by general electorate; Congress, however, insists Ohio's claims, already legalized by admission to Union, be allowed.

November 3. Stevens T. Mason is confirmed by electorate in gubernatorial post, at 23 years of age.

1836 June 15. Congress accepts Michigan's constitution; agrees to admit State upon condition that Michigan accept Ohio's boundary. September 26. At 'Convention of Assent' held at Ann Arbor, Ohio's claims are refused.

October 1. Michigan Southern (Erie & Kalamazoo) Railroad is chartered in 1833, first to operate in Michigan. Horse-power train travels between Toledo and Adrian. (First locomotive in State is put in operation on this line following year.)

December 15. Democrats call convention on own initiative, give assent to entry into Union and loss of Toledo strip: opponents take no part in this 'frost bitten' convention.

Detroit business doubles 1835 figure; property prices are double. Daily stages begin carrying mail and passengers to Sandusky,

Chicago, and Central Michigan; railroad to Jackson is under construction; ship-building becomes important along near-by rivers and lake shores. During seven months of navigation, 200,000 persons pass through Detroit's port.

Bituminous coal mining begins.

Quaker preacher employs underground railroad to bring slaves into Cass County, and movement of fugitive and freed slaves into State begins.

1837 Detroit population is almost 10,000.

January 26. Michigan is admitted to Union as free State.

Upper Peninsula (lost to Wisconsin Territory when that was created, April 20, 1836) is restored to Michigan, substantially in exchange for accepting Ohio's boundary claims.

April 3. Michigan experiences its first strike: journeymen carpenters parade Detroit streets.

1838 April. Detroit elects Michigan's first school board under State law.

The Grand Rapids furniture industry has its beginning.

1839 November. Depression (begun in 1837) helps to break Democratic monopoly, and Whigs carry State election.

1841 February 1. Dr. Douglass Houghton, first State geologist, reports on rich copper deposits of Superior region, and makes cautious mention of possibility of iron ore in Marquette district.

Fall. University of Michigan, reorganized and offering college curriculum, opens at Ann Arbor.

1842 October 4. Indians cede Keweenaw Peninsula and Isle Royale, rich in copper, also valuable iron districts—the last Indian holdings in State.

1844 September 19. Surveyor William A. Burt (inventor solar compass and other important items) accidentally makes first iron-ore discovery, on site of present city of Negaunee.

November 4. General Lewis Cass (secretary of war from 1831 until fall of 1836, when he became ambassador to France) is elected senator from Michigan; holds office 12 years.

November 18. Cliff Lode is discovered, first copper location to be opened in Keweenaw district.

1846 September. Dr. A. C. Van Raalte, Dutch secessionist pastor, sails for Rotterdam with 53 Hollanders; they form nucleus of western Michigan's large Dutch settlements begun the following winter. The Jackson Mining Company begins operations on site of Burt's 1844 discovery: first iron-ore mining in State.

1847 March 17. Old capitol of Detroit used for last time by State legislature, which directs that the capital be permanently located at Lansing.

1848 Spring. 'King' James Strang (Mormon) builds tabernacle and lays out town of St. James on Big Beaver Island; hostilities between followers and mainlanders begin.

- Winter. State legislature meets for first session in new capitol at Lansing.
- 1849 September. First annual State-wide fair held at Detroit.
Cliff Mine (of Cliff Lode) pays a dividend of \$60,000, first sum of this magnitude distributed in North America on copper investment.
Michigan's manufactured goods are valued at more than \$11,-000,000. There are 558 sawmills operating in State.
- 1850 Population, 397,654.
Second State constitution is framed, basis of Michigan's government for more than 50 years.
Beginning of 20-year period during which Know-Nothing Movement is important in local affairs.
- 1851 Lumber mill output of Saginaw amounts to 92,000,000 board feet.
- 1852 Michigan State Normal School is dedicated at Ypsilanti—first teacher-training institute west of Alleghenies.
- 1854 July 6-8. Republican party formed and named at convention held in Jackson.
- 1855 May 21. Soo Ship Canal and Locks are completed by State: destined to be among world's most important waterways commercially.
November: Elder James White arrives in Battle Creek: town becomes headquarters for Seventh-Day Adventists.
- 1856 June 16. 'King' Strang of the Beaver Island Mormons is shot by rebellious followers: dies 23 days later. Slayers, assisted in escape by naval authorities, are never brought to trial. (Mormons are driven out in 1857.)
August. Abraham Lincoln gives antislavery address in Kalamazoo.
- 1857 March 5. General Lewis Cass is appointed secretary of state (succeeded in Senate by Zachariah Chandler).
Michigan State College of Agriculture (authorized 1855), first agricultural college in America, opens at Lansing.
Christian Reformed Church (in North America) is founded by Michigan's Dutch settlers, following secession from Reformed Church.
Railroad is completed between Ishpeming and Marquette, speeding mineral output of Upper Peninsula: open-pit mining begins to pay.
- 1860 Population, 749,113.
Successful well-drilling of salt begins in Saginaw County.
- 1861 April. Thomas A. Edison erects his first electrical battery and begins experiments at Fort Gratiot (Port Huron).
May 13. First Michigan Regiment leaves Fort Wayne: first western regiment to reach Washington during Civil War, in which 90,000 Michigan soldiers see service.
- 1864 February 17. First Michigan Colored Infantry is mustered in. (A Negro volunteer company organized early in 1861 was refused service.) Michigan Negro troops number 1,673.

- September. Bessemer steel is first manufactured in any appreciable amount in America, at Wyandotte.
- 1864 The copper lode at Calumet is discovered. Michigan's production of copper has now for 17 years exceeded that of any other State (holds first place until 1887).
- 1870 Population, 1,054,670: chiefly rural.
Value of agricultural produce for average year is estimated at \$88,000,000.
- 1870-80 Commerce is sufficient to support about 1,800 individually owned sailing vessels; large numbers built along Detroit, St. Clair, and Saginaw Rivers: also, average yearly cut of lumber reaches 3,000,000,000 board feet, and, for 20 years more, Michigan's output remains highest in country.
- 1871 Summer. Tremendous forest fires sweep across State, destroying towns, leveling thousands of acres of valuable pine, causing losses in the millions of dollars.
Calumet & Hecla Mining Company consolidates local (Calumet) mining interests, controlling one of world's richest copper districts. Calumet becomes company town typical of Copper Country.
Negaunee's average annual iron-ore production reaches 135,000 tons.
- 1872 Republic Mine opens: 88 per cent pure iron deposits permit continuous high-level production for 55 years.
- 1873 Financial panic begins early in year.
Vessels passing through Detroit River (on average of one every six minutes) during navigation season carry cargoes totaling \$50,000,000 valuation.
- 1876 At Centennial Exposition (Philadelphia), Detroit is given first place among world's stove-manufacturing centers and receives prizes for shoes; best display of furniture from United States credited to Grand Rapids: State has finest exhibit in forestry products and fruit.
Ontonagon mine operator builds first telephone system (20 miles) in Michigan, after seeing Bell's invention at Philadelphia exposition.
- 1877 Active operations begin in the mines of Menominee iron district.
- 1879 January 1. New State Capitol at Lansing is dedicated and occupied, several months after completion at cost of more than \$1,500,000.
- 1880 Population, 1,636,937, with 75 per cent living in rural areas (*see* 1930).
Discovery of Gogebic Range iron ore in large quantity at Bessemer.
- 1881 June 2. Soo Ship Canal and Locks (improved and enlarged this year and many times afterward) taken over by Federal Government.
October. Railroad ferry service connects Upper and Lower Peninsulas, making Upper Peninsula readily accessible for first time.

- Permanent hydroelectric plant is erected at Grand Rapids—among earliest anywhere. (Experiments here by the Foote brothers result in successful transmission of high voltages over long distances.)
- 1882 November. Josiah W. Begole elected governor on fusion ticket, interrupting an almost unbroken Republican rule that began in 1854.
- 1883 Compulsory school-attendance law is passed.
Half of copper mined in United States since 1847 has come from Michigan.
Cherry orchards in the upper fruit belt first begin to bear.
- 1884 Working of iron-ore deposits of Gogebic Range begins, when transportation facilities are acquired.
John and Thomas Clegg build first self-propelled vehicle of Michigan manufacture, a four-wheeled steamer auto.
- 1885 July. Series of lumber strikes throughout State reaches climax in Saginaw Valley lumbermen's strike, popularly called 'Ten Hours or No Sawdust'; Miltia is called out.
September 15. Michigan College of Mines opens (Houghton).
The ten-hour-day law is passed.
- 1886 Prospecting for oil and gas, and first commercial production, in St. Clair and Saginaw Counties.
- 1887 Ransome E. Olds' first auto steamer appears (steam generated by burning gasoline).
Iron-ore shipments from Menominee Range begin; at end of year, total shipments amount to 6,000,000 tons.
- 1888 Shipments of iron ore from Escanaba alone reach 1,107,129 tons.
- 1890 Population, 2,093,889.
Peak period for manufacture of patented road carts at Flint, bringing city international repute and laying foundations for automotive industry in that city.
- 1891 October 1. Port Huron, Michigan, and Sarnia, Ontario, are joined by Grand Trunk R.R. tunnel under St. Clair River: first sub-aqueous railroad tunnel linking foreign countries.
- 1892 Women's Benefit Association, a sororal insurance association, is organized by Bina West (Miller) at Port Huron (assets reach \$41,000,000 by 1938).
State's lumber output, 3,750,000,000 feet.
- 1893 Olds brings out a practical four-wheeled auto. The first practical Ford car is made.
- 1894 Summer. Hazen S. Pingree, mayor of Detroit, attracts national attention with his city-lot potato patches for feeding 1893 depression sufferers.
Fort on Mackinac Island is given State for a public park.
May (Music) Festival is inaugurated at Ann Arbor.
- 1899 Olds Motor Works erects in Detroit first factory built in America for manufacture of automobiles.

- Detroit Automobile Company organizes to build Ford's car (this becomes Cadillac Company after Ford withdraws).
- 1900 Population, 2,420,982.
- 1902 Packard Motor Car Company and Cadillac Motor Car Company are organized.
- 1903 The House of David (sect founded 1792) is established in Benton Harbor by 'King' Benjamin and 'Queen' Mary Purnell.
- 1904 Organization of Buick Motor Company marks beginning of auto manufacture in Flint on large scale.
- 1906 Timbering of second-growth forests begins in Upper Peninsula.
- 1907 Michigan's third constitution is framed (approved by electorate 1908).
- Detroit Tigers win baseball pennant; also 1908, 1909.
- 1908 William C. Durant organizes General Motors Company (later Corporation).
- Fisher Body Corporation is founded.
- 1910 Fifty years of Michigan supremacy in iron-ore production ends, when Minnesota takes first place, Michigan second.
- 1911 November. Durant organizes Chevrolet Motor Car Company, when Chevrolet brothers complete experiments on new auto.
- 1913 July 23. Western Federation of Miners calls strike among 13,514 Upper Peninsula copper miners: violences and bloodshed result from demands for 8-hour day, minimum daily wage of \$3.50, abolition of 'widow maker'—a one-man drill.
- Legislature passes bill providing for ten trunk-line highways. There are 60,000 autos registered in Michigan.
- 1914 January. Henry Ford announces adoption of \$5 minimum wage for 8-hour day.
- February 14. Congressional committee arrives to investigate copper miners' strike, which terminates shortly afterward, each side claiming victory. Union fails to gain recognition.
- November 14. First Dodge auto is produced.
- Following the 1913 strike, Finns initiate co-operative stores in the copper country.
- First permanent and independent symphony orchestra organizes in Detroit.
- 1916 Many Michigan men join Canadian companies leaving for France. Annual copper production reaches peak of 270,000,000 pounds refined copper: iron ore from Marquette Range alone at peak of 5,500,000 tons.
- 1917 Country's first War Preparedness Board organized in Michigan. In first year of war, Detroit builds 120 ships, spends \$10,000,000 improving plants for making of munitions; its auto manufacturers contract to deliver 19,000 engines.
- 1918 Michigan men in World War service reach total of 135,485.
- April. War contracts let in Detroit now total \$750,000,000.
- 1919 Commercial airplanes placed on sale for first time.
- Influenza deaths in Detroit number 3,814.

- 1920 Population, 3,668,412.
August 20. WWJ, Detroit News Radio Station, opens, pioneer station in broadcasting of regular daily programs.
- 1921 February. Edwin Denby, who had enlisted at Detroit as a private in Marine Corps in 1917, becomes Secretary of the Navy. Important administrative reforms are legislated: superintendent of public instruction is given supervision of all schools, private, denominational, and public; departments of conservation, labor, public safety, welfare, and agriculture are created.
- 1922 March. Bach Music Festival is inaugurated at Ypsilanti. Airline service is established between Detroit and Cleveland.
- 1923 June. William L. Clements Library of American History opens at Ann Arbor.
- 1926 November 3. Worst disaster in Michigan iron mining occurs at Barnes-Hecker Mine, when quicksands break through walls entombing 52 men 1,000 feet below surface; mine is sealed and abandoned.
- 1927 Cranbrook Foundation (Bloomfield Hills) is created and turned over to trustees.
- 1928 First all-metal dirigible, constructed for Navy by Detroit manufacturers, is successfully flown at Grosse Ile Airport.
- 1929 Some large copper mines of Keweenaw Peninsula close (not all yet reopened, 1941): 85 per cent of Keweenaw County population goes on relief.
- 1930 Population, 4,842,325. Indians in State estimated at 7,000, about 1,214 full-bloods. Negroes number 169,453. Urban centers account for 68.2 per cent of population, almost an exact reversal of 1880 situation.
May 2-31. Detroit Institute of Arts presents one of largest showings of Rembrandt paintings ever assembled (80 pieces).
- 1930 Spring. Ann Arbor Dramatic Festival is inaugurated. International under-river vehicle tunnel between Detroit and Windsor, Ontario, is opened.
- 1932 February 14. Governor William A. Comstock calls State-wide 'banking holiday' to avoid bank runs, after disclosure of condition of Union Guardian Trust Company, Detroit.
March 7. 'Ford Hunger March' riot occurs at Ford plant in Dearborn.
September 20. *Miss America X*, motor boat built and piloted by Gar Wood, makes world's record of 124.86 m.p.h. on St. Clair River.
- 1935 Michigan celebrates centennial of statehood.
January. One-fifth of Michigan's employables are without work; State population has dropped 28 per cent since 1930 census.
Fall. Detroit Tigers win World's Championship in baseball series with Chicago Cubs.

- 1936 July. Mass organization of labor under CIO is strengthened by affiliation of International Union, United Automobile Workers of America, with that body.
 December. General Motors strike begins, affecting 150,000 workers and closing more than 60 plants in 14 States.
 Federal Social Security legislation gives practical effect to acts previously passed by State legislature and prompts action toward badly needed co-ordination in State government.
 Writers' Conference for Midwest authors established at Olivet College.
 Soo Locks carry more than twice the tonnage of Suez Canal, about four times that of the Kiel: approximately 70 per cent of Great Lakes freight annually passes the Soo.
- 1937 Frank Murphy is inaugurated governor and is instrumental in bringing UAW strike to peaceful conclusion; collective bargaining agreements are signed by General Motors and most other automotive and parts manufacturers, except Henry Ford.
 Keweenaw Peninsula copper mining again turns upward, production reaching 75,000 pounds.
 Wave of sit-down strikes in various industries leads eventually to breakdown of open-shop tradition in State.
- 1938 October 8. International 'Blue Water' Bridge, connecting Port Huron and Sarnia, Ontario, is dedicated.
 November. Governor Murphy (Democrat) is defeated by former Governor Frank D. Fitzgerald (Republican) for gubernatorial post.
 Oil production, from drilling in 50 counties, estimated at near 19,000,000 barrels; State is second-largest producer east of Mississippi River.
- 1939 January 2. Frank Murphy, former governor, takes office as Attorney General of the United States.
 March 16. Governor Frank D. Fitzgerald dies.
 March 17. Luren D. Dickinson, lieutenant governor in the Fitzgerald administration, becomes governor of Michigan.
 May 15. Governor Dickinson signs 'ripper' Civil Service Bill, removing approximately 11,000 employees from nonpartisan Civil Service as instituted by the Murphy administration (1937-8).
 May 21. Strike is called at Briggs body plant; 1,900 walk out. Strike is settled on June 7.
 May 23. Two Michigan sailors are among crew of submarine 'Squalus' that sinks on trial run 15 miles off Portsmouth, N. H.
 July 5. Strike of General Motors tool and die makers is called; settlement, August 6, is approved by 99 per cent of the workers.
 August 9. Tornadoes and freak storms injure scores of persons and cause damage estimated at over a million dollars in Lower Peninsula.

1940

October 10. UAW-CIO calls strike at Dodge plants of the Chrysler Corporation, affecting 16,000 workers. Strike is settled November 30, with granting of pay increases as high as 13¢ an hour.

January 4. Attorney General Frank Murphy is appointed to the United States Supreme Court to succeed the late Associate Justice Pierce Butler.

Population, 5,256,106.

July 1. Canadian border restrictions tightened for citizens of the two countries.

July 15. The world's tallest man, Robert P. Wadlow, 8 feet, 9½ inches tall, dies at Manistee, Michigan, at the age of 22.

July 22. William W. Potter, Justice of Michigan Supreme Court, dies of injuries received in auto accident.

July 25. Detroit celebrates 50th anniversary of inauguration of free music programs in city parks.

August 6. The United States Army's largest plane joins the 1st Pursuit Group at Selfridge Field.

August 18. Walter P. Chrysler, president of the Chrysler Motor Car Co., dies at the age of 65.

August 20. Spanish-American War Veterans hold their 42nd encampment in Detroit with an attendance of more than 20,000.

October 16. All-time record reached with 719,145 voters registered for November 5th election.

November 5. Murray D. Van Wagoner, Democratic candidate, elected Governor of Michigan over Luren D. Dickinson (incumbent).

November 11. Coast Guard officials estimate 65 persons lost their lives in the waters of Lake Michigan in 78-mile-an-hour gale; sixteen bodies washed ashore at Ludington.

November 14. Work started on Wayne University College of Medicine Health Center, to be situated in Memorial Park, Detroit, and to cost \$100,000,000.

November 19. Governor Dickinson appoints Mrs. Matilda Wilson Lieutenant Governor.

December 19. William S. Knudsen, General Motors executive, named head of National Defense Council.

December 21. C. Harold Wills, former automobile manufacturer and metallurgist, dies at the Henry Ford Hospital at the age of 62.

Bibliography

- Karpinski, Louis C. *Bibliography of the Printed Maps of Michigan, 1804-1880*. Lansing. Michigan Historical Commission, 1931
- *Historical Atlas of the Great Lakes and Michigan*. Lansing. Michigan Historical Commission, 1931.
- Michigan. Commission of Inquiry into County, Township and School District Government. Michigan Local Government Series. Detroit, 1933-4. 10 v. Contents; v. 1. *Organization and Cost of County and Township Government*, by A. W. Bromage and T. H. Reed; v. 2. *Township Government and the Exploitation of Timber and Wild Land Resources in Northern Michigan*, by W. F. Ramsdell; v. 3. *Organization and Administration of Public Health*, by N. Sinai; v. 4. *Rural School Organization in Michigan*, by F. M. Thrun; v. 5. *Local Relief to Dependents*, by O. V. Matson; v. 6. *Local Finance and Procedure*, by L. B. Miller; v. 7. *Population Trends*, by G. T. Ragsdale, *Natural Community Areas*, by J. F. Thaden; *Rural Land Zoning*, by P. A. Herbert; v. 8. *School Organization in the Detroit Metropolitan Area*, by D. S. Miller; v. 9. *Local Public Works Administration in Michigan*, by R. L. Morrison, W. C. Sadler, and L. J. Rothgary; v. 10. *The Government of the Detroit Metropolitan Area*, by J. M. Leonard and L. D. Upson.
- Michigan, Department of State. *Michigan Manual* A legislative manual and official directory. Lansing. Department of State, 1837 and biennially to date.
- Michigan Historical Commission. *Michigan Biographies*. v. 1. Lansing. Michigan Historical Commission, 1924.
- Michigan, University of. Publications on anthropology, business research, education, history, zoology, etc.
- Michigan, University of. William L. Clements Library of American History. *Michigan Through Three Centuries*. (Bibliography). Ann Arbor. The Library, University of Michigan, 1937
- Official Who's Who in Michigan*. Munising. 1936.
- Streeter, Floyd Benjamin. *Michigan Bibliography*. 2 v. A partial catalog of books, manuscripts, maps and miscellaneous materials relating to the resources, development and history of Michigan from earliest times to July 10, 1917. Cleveland. Arthur H. Clark Co., 1911; Lansing. Michigan Historical Commission, 1921.

DESCRIPTION AND TRAVEL

- Chater, Melville. 'Michigan, Mistress of the Lakes.' Washington, D. C. *National Geographic Magazine*, 53: 269-325, March 1928.

- Hubbard, Bela. *Memorials of a Half Century*. Contains interesting chapters on climate, fauna, and flora of the State, the mound builders, and scenery around the Great Lakes. New York. G. P. Putnam's Sons, 1887.
- Michigan. Department of Agriculture. *Michigan, the Peninsula State*. Lansing. Dept. of Agriculture, 1938.
- Michigan. State Planning Commission. *Study of Michigan*. Lansing. State Planning Commission, 1935.
- Miller, George J. *Some Geographical Influences in the Settlement of Michigan*. New York. American Geographical Society Bulletin, v. 45: 321-48, 1913.
- Newnom, C. L. *Michigan's Thirty-seven Million Acres of Diamonds*. Detroit. The Book of Michigan Co., 1927.
- Parkins, Almon Ernest. *Historical Geography of Detroit*. Lansing. Michigan Historical Commission, 1918.
- Scott, Irving Day. *Inland Lakes of Michigan*. (Michigan Geological and Biological Survey, publication 30, geological series 25) Lansing. Wynkoop, Hallenbeck, Crawford Co., 1921.
- Stull, De Forest. *Geography of Michigan*. Supplement to *Our World Today*. Boston. Allyn & Bacon, 1939.
- Wood, L. H. *Physical, Industrial and Sectional Geography of Michigan*. Kalamazoo. Horton-Beimer Press, 1914.

GEOLOGY

- Dewey, Franklin S. 'What the Glaciers Did for Michigan.' Lansing. Michigan History Magazine, 5: 374-83, July-October 1921.
- Lane, A. C. *The Geology of Lower Michigan*. (Michigan Geological Survey, reports, v. 5, pt. 2.) Lansing. R. Smith & Co., 1895.
- Leverett, Frank. *Surface Geology and Agricultural Conditions of Michigan*. (Michigan Geological Survey, publication 25, geological series 21.) Lansing. Wynkoop, Hallenbeck, Crawford Co., 1917.
- Michigan Geological Survey. *Mineral Resources of Michigan*, with statistical tables of production and value of mineral products for 1924, 1925, 1926, and prior years. With a report on oil and gas development, by R. B. Newcombe. (Department of Conservation, Geological Survey Division, publication 37, geological series 31.) Lansing. Franklin DeKleine Co., 1928.
- Newcombe, R. B. *Oil and Gas Fields of Michigan*. (Michigan Geological Survey, publication 38, geological series 32.) Lansing. Franklin DeKleine Co., 1933.

CLIMATE

- Day, P. C. 'Precipitation in the Drainage Area of the Great Lakes, 1875-1924,' with discussion of the levels of the separate lakes and their relations to the annual precipitation. *U. S. Monthly Weather Review*, v. 54: 85-106, March 1926.
- Seeley, Dewey A. *The Climate of Michigan and Its Relation to Agriculture*. Lansing. Wynkoop, Hallenbeck, Crawford Co., 1917.

FLORA AND FAUNA

- Aggassiz, Louis. *Lake Superior, Its Physical Character, Vegetation, Animals, etc* Boston, Gould, Kimball & Lincoln, 1850.
- Beal, W. J. *Michigan Flora* 3rd ed. A list of the fern and seed plants growing without cultivation. Lansing. State Board of Agriculture, Agricultural College, 1904.
- Bingham, M. T. *Orchids of Michigan*. (Bulletin 15.) Bloomfield Hills. Cranbrook Institute of Science, 1939.
- Bradford, Walter. *Michigan Bird Life*. Lansing. Michigan Agricultural College, 1912.
- Brown, C. A. *Ferns and Flowering Plants of Isle Royale, Michigan*. Washington, D. C. Government Printing Office, 1937.
- Cole, Emma J. *Grand Rapids Flora*. Grand Rapids. A. Van Dort, 1901.
- Davis, Charles A. 'The Flora of Michigan Lakes' (Included in *Annual Report of Michigan Academy of Science*, 1899) Lansing. Robert Smith Pub. Co., 1900.
- Dice, L. R. *A Manual of the Recent Wild Mammals of Michigan*. (Michigan handbook series 2.) Ann Arbor. University of Michigan, 1927.
- Dodge, Charles K. *Contributions to the Botany of Michigan*. Two pamphlets. Ann Arbor. University of Michigan Press. 1st ed. Feb. 23, 1918, 2nd ed. July 13, 1918.
- Downing, Eliot R. *A Naturalist in the Great Lakes Region*. Chicago. University of Chicago Press, 1922.
- DuMond, F. L. *Introduction to the Birds of Michigan*. Grand Rapids. Michigan Audubon Society, 1937.
- Gleason, H. A. *The Plants of Michigan*. Ann Arbor. George Wahr, 1918.
- Michigan. Department of Conservation. *Wildflowers of Michigan*. Lansing. 1939.
- Otis, C. H. *Michigan Trees*. Ann Arbor. The Regents, University of Michigan, 1931.

ARCHEOLOGY AND INDIANS

- Blackbird, Andrew J. *History of the Ottawa and Chippewa Indians of Michigan*. Harbor Springs. Babcock & Darling, 1897.
- Dustin, Fred. *Report on Indian Earthworks in Ogemaw County*. Cranbrook. 1932.
- Fox, George R. 'What About Michigan Archeology.' Lansing. *Michigan History Magazine*, 6: 415-34, 1922.
- Greenman, E. F. *The Young Site. An archeological record from Michigan*. (University of Michigan, Museum of Anthropology, occasional contributions 6.) Ann Arbor. University of Michigan Press, 1937.
- *Wolf and Furton Sites, Macomb County*. Ann Arbor. University of Michigan Press, 1939.
- Hinsdale, Wilbert B. *Archeological Atlas of Michigan*. Ann Arbor. University of Michigan Press, 1931.

- Hinsdale, Wilbert B. *First People of Michigan*. Ann Arbor. George Wahr, 1930.
- *Primitive Man in Michigan*. (Michigan handbook series 1.) Ann Arbor. University of Michigan, 1925.
- Larzelere, Claude S. 'The Red Man in Michigan.' Lansing. *Michigan History Magazine*, 17: 344-76. Summer and Autumn 1933.
- Littlejohn, F. J. *Legends of Michigan and the Old Northwest*. Allegan. Northwestern Bible and Publishing Co., 1875.
- Schoolcraft, Henry Rowe. *Algonic Researches*. 2 v., New York. Harper & Bros., 1839.
- Smith, Harlan I. The Antiquities of Michigan: their value and impending loss. Lansing. Michigan Pioneer and Historical Society. Historical Collections, v. 31: 238-52, 1902.

HISTORY

- Campbell, J. V. *Outlines of the Political History of Michigan*. Detroit. Schober & Co., 1876.
- Cooley, Thomas McIntyre. *Michigan: a History of Governments*. Boston. Houghton Mifflin Co.
- Cox, William J. *A Primer of Michigan History*; revised by George N. Fuller and Henry R. Pattengill. Lansing. Michigan School Service Co.
- Farmer, Silas. *The History of Detroit and Wayne County and Early Michigan*. 3d ed. rev., 2 v., Detroit. Silas Farmer & Co., 1890.
- Fuller, G. N. *Economic and Social Beginnings of Michigan*. Lansing. Wynkoop, Hallenbeck, Crawford Co., 1916.
- Kinzie, Juliette Augusta (Magill). *Wau-bun, the Early Days in the Northwest*; ed. with notes and introduction by Louise Phelps Kellogg. Banta, 1930. (New York. Derby & Jackson.)
- Lanman, C. *The Red Book of Michigan: a civil, military and biographical history of Michigan*. Washington, E. B. Smith & Co., 1871.
- Lanman, J. H. *History of Michigan from Its Earliest Colonization to the Present Time*. New York. Harper & Bros., 1859.
- Larzelere, Claude S. *The Story of Michigan*. 2nd ed. Lansing. Michigan School Service Co., 1936.
- Laut, Agnes C. *Cadillac: Knight Errant of the Wilderness, Founder of Detroit, Governor of Louisiana from the Great Lakes to the Gulf*.
- McLaughlin, Andrew C. *Lewis Cass*. Boston. Houghton Mifflin Co., 1919.
- Michigan Historical Commission. *Michigan History Magazine*. Published quarterly since July 1917. Lansing.
- Michigan Pioneer and Historical Society. *Historical Collections*. 40 v., Lansing. 1874-1929.
- Moore, Charles. *History of Michigan*. 4 v., Chicago. Lewis Publishing Co., 1915.
- *The Northwest under Three Flags, 1635-1796*. New York and London. Harper & Bros., 1900.
- Parkman, Francis A. *The Jesuits in North America*. Boston. Little, Brown, 1902.

- Powers, Perry F. *History of Northern Michigan and Its People*. Chicago. The Lewis Pub. Co., 1912.
- Repplier, Agnes. *Pere Marquette, Priest, Pioneer and Adventurer*. New York. Doubleday, Doran, 1929.
- Russell, John Andrew. *Germanic Influence in the Making of Michigan*. University of Detroit, 1927.
- Russell, Nelson Vance. *British Regime in Michigan and the Old Northwest, 1760-1796*. Northfield, Minnesota. Carleton College, 1939.
- Severance, Henry O. *Michigan Trailmakers*. Ann Arbor. George Wahr, 1930.
- Sheldon, Mrs. E. M. *Early History of Michigan, from the First Settlement to 1815*. Detroit. Kerr, Morley & Co., 1856; New York. A. S. Barnes & Co., 1874.
- Utley, H. M., Cutcheon, B. M., and Burton, C. M. *Michigan as a Province, Territory and State, the twenty-sixth member of the Federal Union*. 4 v., New York. Publishing Society of Michigan, 1906.
- Way, Willard V. *Facts and Historical Events of the Toledo War of 1835*. Abbott, 1930.

GOVERNMENT

- Adams, M. J. *The History of Suffrage in Michigan*. Ann Arbor. Michigan Political Science Association, publication, v. 3, no. 1, March 1898.
- Benson, G. C. S. *The State Administrative Board in Michigan*. (University of Michigan. Michigan Governmental Studies, 1) Ann Arbor. 1938.
- Chase, Lew Allen. *Government of Michigan*. New York. Charles Scribner's Sons, 1919.
- Dilla, Harriette M. *The Politics of Michigan, 1865-1878*. (Columbia's Studies in History, Economics and Public Law, v. 47, no. 1.) New York. Columbia University, 1912.
- Dorr, H. M. *Administrative Organization of State Government in Michigan, 1921-1936*. (University of Michigan, Bureau of Government bulletin, new series, 5.) Ann Arbor. July 1936.
- Larzelere, Claude Sheldon. *Government of Michigan*. Mount Pleasant. Printed by author, 1932. Hillsdale, 1935 ed.
- McKone, W. J. *Michigan State and Local Government*. 24th ed. Lansing. Michigan Education Co., 1925.
- Michigan. State Planning Commission. *Report of the Subcommittee on State Government of the State Planning Commission*. Lansing. 1936.
- Moore, Charles (compiler). *The Beginning of Territorial Government in Michigan*. (Michigan Pioneer and Historical Society. *Historical Collections*. v. 31: 510-612.) Lansing. 1901.
- Pattengill, Henry R. (compiler). *Civil Government in Michigan*. 20th ed. rev. Lansing. 1911.
- Streeter, F. B. *Political Parties in Michigan, 1837-1860*. Lansing. Michigan Historical Commission.

STATE DEVELOPMENT

- Blackett, Olin Winthrop. *Factory Labor Turnover in Michigan*. Ann Arbor. University of Michigan, 1928.
- Chase, Lew Allen. *Rural Michigan*. New York. Macmillan, 1922.
- Koelz, Walter. *Fishing Industry of the Great Lakes*. (U. S. Bureau of Fisheries, document 1001. Appendix XI to the report of the U. S. Commission of Fisheries for 1925.) Washington, D. C. Government Printing Office, 1926.
- Lewis, Ferris E. *My State and Its Story*. History and economic conditions. Hillsdale, 1939.
- Michigan Manufacturer and Financial Record. *Book of Michigan Industry*. Detroit. Manufacturer Publishing Company 1924.
- Mills, James Cooke. *Our Inland Seas: their shipping and commerce for three centuries*. Chicago. McClurg, 1910.
- Osborn, Chase S. *The Iron Hunter*. New York. The Macmillan Company, 1919.
- Plumb, R. G. *History of Navigation on the Great Lakes*. Washington, D. C. Government Printing Office, 1911.
- Pound, Arthur. *Turning Wheel: the Story of General Motors through Twenty-five Years, 1908-1933*. Doubleday, 1934.
- Sawyer, Alvah Littlefield. *A History of the Northern Peninsula and Its People: Its Mining, Lumber and Agriculture Industries*. 3 v., Chicago. Lewis Pub. Company, 1911.
- Seeley, Dewey A. *Michigan Agriculture*. Lansing. Department of Agriculture, 1922.
- United States Engineering Department. *Transportation on the Great Lakes* (revised, 1937, transportation series 1). Washington, D. C. Government Printing Office, 1937.
- Van Oosten, John. 'Michigan's Commercial Fisheries in the Great Lakes.' *Michigan History Magazine*, 22: 107-45. Winter 1938.

EDUCATION

- Beal, W. J. *History of the Michigan Agricultural College*. East Lansing. Agricultural College, 1915.
- Hinsdale, Burke, Aaron, and Demmon, I. N. *History of the University of Michigan*. Ann Arbor. University of Michigan Press, 1906.
- Hoyt, C. O., and Ford, R. C. *John D. Pierce, Founder of the Michigan School System*. Ypsilanti. The Scharf Tag, Label and Box Co., 1905.
- Jackson, G. L. *The Development of State Control of Public Instruction in Michigan*. Lansing. Michigan Historical Commission, 1926.
- McLaughlin, A. C. *History of Higher Education in Michigan*. (U. S. Office of Education, circular of information, 4.) Washington, D. C. Government Printing Office, 1891.
- Mary Rosalita, Sister. *Education in Detroit Prior to 1850*. Lansing. Michigan Historical Commission, 1928.

- Mead, A. R. *The Development of Free Schools in the United States as Illustrated by Connecticut and Michigan*. (Columbia University Teachers College, contributions to education, 91.) New York. Columbia University Press, 1918.
- Michigan. Department of Public Instruction. *Michigan Today: its human and physical resources as they affect education*. Lansing. Supt. of Public Instruction. Bulletin No. 307, 1937.
- Michigan Education Association. Bulletins, 1924. A series of studies of Michigan educational problems. Some of the bulletins are: No. 5. *Rural Teachers' Salaries in Michigan*; No. 6. *History of Educational Funds in Michigan*; No. 7. *The Value of Supervision in the Rural Schools of Michigan*; No. 8. *Michigan Public School Handbook*; No. 25. *Educating Michigan's Children*; No. 26. *A Study of the Supply and the Demand for Teachers in Michigan*.
- Michigan Department of Public Instruction. *System of Public Instruction and Primary School Law of Michigan*. Lansing. Ingals, Hedges & Co., 1852.
- Putnam, Daniel. *The Development of Primary and Secondary Public Education in Michigan*. Ann Arbor. George Wahr, 1904.
- *History of the State Normal School at Ypsilanti*. Ypsilanti. Scharf Tag, Label and Box Co., 1899.
- Shaw, W. B. *A Short History of the University of Michigan*. Ann Arbor. George Wahr, 1937.
- Thrum, F. M. *Rural School Organization in Michigan*. (Michigan local government series, 4.) East Lansing. 1933.

RECREATION

- Automobile Club of Michigan. *Michigan State Parks*. Location, features, facilities. Detroit. Travel Bureau, 1939.
- Halligan, C. P. *Tourist Camps*. Lansing. Michigan Agricultural Experiment Station Special Bulletin No. 139.
- Haynes, Rowland. *Recreation Survey*. Detroit. Detroit Board of Commerce Committee on Recreation System, 1913.
- Hedrick, W. P. *Recreational Use of Northern Michigan Cut-over Lands*. (Michigan Agricultural Experiment Station Special Bulletin No. 247.) East Lansing. Michigan State College, 1934.
- Hoffmaster, P. J. 'Nature's Last Frontier.' Lansing. *Michigan History Magazine*, 2: 18, April 1930.
- Michigan Department of Conservation. *The Parks of the People*. Lansing. R. Smith Co., 1924.
- Michigan Lakes and Streams Directory*. East Lansing. Magazine of Michigan Co., 1931.
- Prophet, E. C. *Some Types of Recreational Land Use in Michigan*. (Michigan Academy of Science, Arts and Letters, Papers. v. 22: 385-95. 1936.) Ann Arbor. University of Michigan Press.
- Robinson, William G. 'Playground and Recreation Movement.' *Michigan History Magazine*, 22: 272-80. Summer 1938.

CITIES AND POINTS OF INTEREST

- Magazine of Michigan.* Many articles on the various points of interest in Michigan will be found in the issues of this magazine.
- Newton, Stanley. *The Story of Sault Ste. Marie and Chippewa County.* Sault Ste. Marie. Sault New Printing Co., 1923.
- Reynolds, C. F. *The Standard Guide: Mackinac Island and Northern Lake Resorts.* Includes Sault Ste. Marie, Petoskey, St. Joseph, Pointe Aux Barques and Battle Creek, with some history of Mackinac. New York. Foster & Reynolds, 1904.

DETROIT

- Barcus, Frank. *All Around Detroit.* Detroit. Frank Barcus Art Studios, 1939.
- Burton, Clarence M. *City of Detroit, Michigan.* 5 v., Detroit-Chicago. S. J. Clark Pub. Co., 1922.
- Catlin, G. B. *Story of Detroit.* Detroit. *Detroit News*, 1926.
- Marsh, Harriet A. and Florence A. *History of Detroit for Young People.* Chicago. Lakeside Press, R. R. Donnelley & Sons Co., 1935.
- Rand, McNally. *Guide to Detroit and Environs.* Chicago. Rand McNally & Co., 1922.
- Ross, Robert B. and Catlin, George B. *Landmarks of Detroit.* Detroit. *Detroit Evening News*, 1898.
- Simonds, W. A. *Henry Ford and Greenfield Village.* New York. Frederick A. Stokes Co., 1938.

THE GREAT LAKES

- Beasley, Norman. *Freighters of Fortune: the Story of the Great Lakes.* New York. Harper & Bros., 1930.
- Channing, Edward, and Lansing, M. F. *The Story of the Great Lakes.* New York. Macmillan, 1909.
- Curwood, James Oliver. *The Great Lakes; the Vessels that Plough Them; Their Owners, Their Sailors and Their Cargoes.* New York. G. P. Putnam's Sons, 1909.
- Cuthbertson, J. A. *Freshwater.* Toronto. Macmillan Company of Canada, 1931.
- Kane, Grace Franks. *Myths and Legends of the Mackinacs and Lake Region.* Cincinnati. Editor Pub. Co., 1897.
- Lawler, W. F. 'Michigan Islands.' *Michigan History Magazine*, 22: 281-310. Summer 1938.
- Mansfield, J. B., ed. *History of the Great Lakes.* 2 v., Chicago. J. H. Beers & Co., 1899.
- Waldron, Webb. *We Explore the Great Lakes.* New York and London. Century, 1923.
- (Other titles under *History* and *State Development*.)

FICTION AND FOLKLORE

- Armstrong, Mrs. Louise (Van Voorhis). *We Too Are the People*. Stories relating to relief administration in Michigan. New York. Little, 1938.
- Bowman, James Cloyd. *Adventures of Paul Bunyan*. New York. Century, 1927.
- Cline, Leonard. *God Head*. Viking Press, 1926.
- Crowley, Mary. *Daughter of New France*. Describes Cadillac and his colony in early Detroit. Boston. Little, Brown & Co., 1901.
- Eaton, Geoffrey Dell. *Backfurrow*. New York. Putnam, 1925.
- Fischer, Pauline Benedict. *Clay Acres*. Story of the family of James Gelston, who came to Michigan in 1860. Philadelphia. Penn Publishing Co., 1938.
- Lewis, Janet. *The Invasion*. Against the background of the Great Lakes country, the blending of Indian and English cultures is pictured in the life of the Johnston family of St. Mary's. New York. Harcourt, Brace & Co., 1932.
- Mulder, Arnold. 'Authors and Wolverines; the Books and Writers of Michigan.' *The Saturday Review of Literature*, v. 19: 1939; pp. 3-4.
- *The Sand Doctor*. New York. Houghton, 1921.
- Pound, Arthur. *Once a Wilderness*. New York. Reynal, 1934.
- Smither, Wessel. *F.O.B. Detroit*. New York. Harper & Bros., 1938.
- Steele, James. *The Conveyor*. Presents the life of an automobile worker. New York. International Publishing Co., 1935.
- Stevens, James. *Saginaw Paul Bunyan*. New York. Alfred A. Knopf, 1932.
- Thwing, Eugene. *The Red Keggers*. The district schools in the Saginaw country. New York. Book-Lover Press, 1903.
- Titus, Harold. *Timber*. Reforestation in the Michigan pine country. Boston. Small, 1922.
- Walker, Mildred. *Fireweed*. Present-day life in an Upper Michigan lumbering town. New York. Harcourt, Brace & Co., 1934.
- White, Stewart Edward. *Blazed Trail*. Life in the timber districts of Michigan. New York. Doubleday, Doran, 1902.
- *Riverman*. New York. Doubleday, Doran, 1908.
- Whitlock, Brand. *Strangers on the Island*. The story is set on an island off the mainland of Michigan. New York. D. Appleton, 1933.
- Woolson, Constance. *Anne*. Mackinac Island is the setting. New York. Harper & Bros., 1882.

1940 Census Figures

(The following are final figures of all incorporated cities, towns, and villages)

CITIES OF 10,000 OR MORE

	<i>Population</i>			<i>Population</i>	
	<i>1940</i>	<i>1930</i>		<i>1940</i>	<i>1930</i>
Adrian	14,230	13,064	Muskegon		
Alpena	12,808	12,166	Heights	16,047	15,584
Ann Arbor	29,815	26,944	Niles	11,328	11,326
Battle Creek	43,453	43,573	Owosso	14,424	14,496
Bay City	47,956	47,355	Pontiac	66,626	64,928
Benton Harbor	16,668	15,434	Port Huron	32,759	31,361
Birmingham	11,196	9,539	River Rouge	17,008	17,314
Dearborn	63,584	50,358	Royal Oak	25,087	22,904
Detroit	1,623,452	1,568,662	Saginaw	82,794	80,715
Ecorse	13,209	12,716	St. Clair Shores	10,405	6,745
Escanaba	14,830	14,524	Sault Ste. Marie	15,847	13,755
Ferndale	22,523	20,855	Traverse City	14,455	12,539
Flint	151,543	156,492	Wyandotte	30,618	28,368
Grand Rapids	164,292	168,592	Ypsilanti	12,121	10,143
Grosse Pointe Park	12,646	11,174	2,500 TO	10,000	
Hamtramck	49,839	56,268	Albion	8,345	8,324
Highland Park	50,810	52,959	Allegan	4,526	3,941
Holland	14,616	14,346	Allen Park	3,487	944
Iron Mountain	11,080	11,652	Alma	7,202	6,734
Ironwood	13,369	14,299	Bad Axe	2,624	2,332
Jackson	49,656	55,187	Belding	4,089	4,140
Kalamazoo	54,097	54,786	Berkley	6,406	5,571
Lansing	78,753	78,397	Bessemer	4,080	4,035
Lincoln Park	15,236	12,336	Big Rapids	4,987	4,671
Marquette	15,928	14,789	Boyne City	2,904	2,650
Menominee	10,230	10,320	Buchanan	4,056	3,922
Midland	10,329	8,038	Cadillac	9,855	9,570
Monroe	18,478	18,110	Caro	3,070	2,554
Mount Clemens	14,389	13,497	Centerline	3,198	2,604
Muskegon	47,697	41,390	Charlotte	5,544	5,307

656 1940 CENSUS FIGURES

	<i>Population</i>			<i>Population</i>	
	<i>1940</i>	<i>1930</i>		<i>1940</i>	<i>1930</i>
Cheboygan	5,673	4,923	Negaunee	6,813	6,552
Clawson	4,006	3,377	Newberry	2,732	2,465
Coldwater	7,343	6,735	Northville	3,032	2,566
Crystal Falls	2,641	2,995	Norway	3,728	4,016
Dowagiac	5,007	5,550	Otsego	3,428	3,245
Durand	3,127	3,081	Petoskey	6,019	5,740
East Detroit	8,584	5,955	Pleasant Ridge	3,391	2,885
East Grand Rapids	4,899	4,024	Plymouth	5,360	4,484
East Lansing	5,839	4,389	Rochester	3,759	3,554
Eaton Rapids	3,060	2,822	Rogers City	3,072	3,278
Fenton	3,377	3,171	Romeo	2,627	2,283
Fremont	2,520	2,157	Roseville	9,023	6,836
Garden City	4,096	2,081	St. Clair	3,471	3,389
Gladstone	4,972	5,170	St. Ignace	2,669	2,109
Grand Haven	8,799	8,345	St. Johns	4,422	3,929
Grand Ledge	3,899	3,572	St. Joseph	8,963	8,349
Greenville	5,321	4,730	St. Louis	3,039	2,494
Grosse Pointe	6,179	5,173	South Haven	4,745	4,804
Grosse Pointe Farms	7,217	3,533	Sturgis	7,214	6,950
Grosse Pointe Woods	2,805	961	Tecumseh	2,921	2,456
Hancock	5,554	5,795	Three Rivers	6,710	6,863
Hastings	5,175	5,227	Trenton	5,284	4,022
Hillsdale	6,381	5,896	Wakefield	3,591	3,677
Houghton	3,693	3,757	Wayne	4,223	3,423
Howell	3,748	3,615	Zeeland	3,007	2,850
Inkster	7,044	4,440	LESS THAN 2,500		
Ionia	6,392	6,562	Addison	465	452
Iron River	4,416	4,665	Ahmeek	475	624
Ishpeming	9,491	9,238	Akron	413	441
Kingsford	5,771	5,526	Alanson	330	287
L'Anse	2,564	2,421	Algonac	1,931	1,736
Lapeer	5,365	5,008	Almont	924	844
Laurium	3,929	4,916	Alpha	497	560
Ludington	8,701	8,898	Applegate	231	207
Manistee	8,694	8,078	Armada	865	840
Manistique	5,399	5,198	Ashley	466	419
Marine City	3,033	3,462	Athens	658	622
Marshall	5,253	5,019	Au Gres	317	203
Mason	2,867	2,575	Augusta	785	711
Melvindale	4,764	4,053	Baldwin	612	518
Mount Pleasant	8,413	5,211	Bancroft	581	439
Munising	4,409	3,956	Bangor	1,409	1,274
			Baraga	1,110	1,045
			Baroda	302	291

<i>Population</i>			<i>Population</i>		
	1940	1930		1940	1930
Barryton	342	331	Clio	1,711	1,548
Bear Lake	327	325	Coleman	722	667
Beaverton	641	528	Coloma	960	826
Bellaire	652	517	Colon	896	781
Belleville	1,286	758	Columbiaville	664	477
Bellevue	1,011	1,029	Concord	618	603
Benzonia	340	623	Constantine	1,384	1,259
Berrien Springs	1,510	1,413	Coopersville	1,083	1,004
Beulah	378	.	Copemish	241	266
Blissfield	2,144	2,103	Copper City	479	587
Bloomfield Hills	1,281	1,127	Corunna	2,017	1,936
Bloomington	553	386	Croswell	1,381	1,470
Boyne Falls	213	199	Custer	237	281
Breckenridge	868	685			
Breedsville	184	167	Daggett	283	291
Bridgman	774	848	Dansville	351	315
Brighton	1,353	1,287	Davison	1,397	1,298
Britton	409	368	Decatur	1,599	1,582
Bronson	1,871	1,651	Deckerville	647	523
Brooklyn	749	733	Deerfield	569	512
Brown City	838	785	De Tour	595	616
Buckley	217	236	De Witt	651	476
Burlington	207	198	Dexter	1,087	894
Burr Oak	706	680	Dimondale	604	545
Byron	469	387	Douglas	421	368
			Dryden	411	383
Caledonia	467	469	Dundee	1,699	1,364
Calumet	1,460	1,557			
Camden	385	316	Eagle	147	123
Capac	920	837	East Jordan	1,725	1,523
Carleton	864	837	East Lake	412	392
Carson City	1,112	972	East Tawas	1,670	1,455
Carsonville	433	444	Eau Claire	328	324
Caseville	451	412	Edmore	825	897
Casnovia	289	254	Edwardsburg	482	388
Caspian	1,797	1,888	Elberta	617	609
Cass City	1,362	1,261	Elk Rapids	690	615
Cassopolis	1,488	1,448	Elkton	539	538
Cedar Springs	1,101	1,104	Ellsworth	347	
Central Lake	659	607	Elsie	773	664
Centreville	812	820	Emmett	229	199
Charlevoix	2,299	2,247	Empire	266	302
Chelsea	2,246	2,268	Essexville	2,390	1,864
Chesaning	1,807	1,594	Estral Beach	78	
Clare	1,844	1,491	Evart	1,335	1,301
Clarkston	653	639			
Clarksville	309	284	Fairgrove	481	437
Clayton	375	372	Farmington	1,510	1,243
Clifford	321	293	Farwell	538	422
Climax	460	441	Fennville	643	622
Clinton	1,126	1,026	Fife Lake	303	227
			Flat Rock	1,467	1,231

658 1940 CENSUS FIGURES

<i>Population</i>			<i>Population</i>		
	1940	1930		1940	1930
Flushing	1,806	1,723	Jonesville	1,302	1,316
Forestville	156	74	Kalkaska	1,132	861
Fountain	235	223	Kent City	440	484
Fowler	579	561	Kinde	503	412
Fowlerville	1,118	1,141	Kingsley	385	302
Frankenmuth	1,100	925	Kingston	314	331
Frankfort	1,642	1,468	Laingsburg	896	767
Fraser	747	600	Lake Angelus	139	27
Freeport	405	388	Lake Ann	37	31
Freesoil	236	239	Lake City	693	610
Fruitport	458	367	Lake Linden	1,631	1,714
Gaastra	773	755	Lake Odessa	1,417	1,220
Gagetown	354	368	Lake Orion	1,933	1,369
Gaines	268	250	Lakeview	824	850
Galesburg	1,040	936	Lawrence	679	570
Galien	567	488	Lawton	1,134	1,164
Garden	462	371	Leonard	276	280
Gaylord	2,055	1,627	Le Roy	274	270
Gladwin	1,600	1,248	Leslie	1,281	1,105
Gobles	616	519	Lexington	326	380
Grand Blanc	1,012	917	Lincoln	295	250
Grandville	1,566	1,346	Linden	782	717
Grant	552	483	Lisbon	51	61
Grass Lake	810	804	Litchfield	717	634
Grayling	2,124	1,973	Lowell	1,944	1,919
Grosse Pointe Shores	801	621	Luther	343	337
Hanover	402	375	Lyons	596	592
Harbor Beach	2,186	1,892	McBain	489	463
Harbor Springs	1,423	1,429	McBride	186	204
Harrietta	208	149	Mackinac Island	508	566
Harrison	727	458	Mackinaw City	922	875
Harrisville	437	438	Mancelona	1,173	1,143
Hart	1,922	1,690	Manchester	1,100	1,037
Hartford	1,694	1,484	Manton	1,006	1,008
Hersey	202	279	Maple Rapids	580	476
Hesperia	535	467	Marcellus	992	944
Hillman	363	289	Marion	710	607
Holly	2,343	2,252	Marlette	1,161	990
Homer	1,145	1,108	Marysville	1,777	1,405
Honor	284	254	Maybee	390	346
Hopkins	455	384	Mayville	736	654
Howard City	839	872	Mecosta	254	262
Hubbardston	391	344	Melvin	152	168
Hudson	2,426	2,361	Memphis	630	574
Hudsonville	837	643	Mendon	667	692
Huntington Woods	1,705	655	Merrill	711	616
Imlay City	1,446	1,495	Mesick	327	303
Ithaca	2,000	1,780	Metamora	281	293
			Middleville	833	804

	<i>Population</i>			<i>Population</i>	
	<i>1940</i>	<i>1930</i>		<i>1940</i>	<i>1930</i>
Milan	2,340	1,947	Pierson	147	144
Milford	1,637	1,364	Pigeon	949	836
Millersburg	306	297	Pinckney	456	433
Millington	813	678	Pinconning	1,027	826
Minden City	321	277	Plainwell	2,424	2,279
Mineral Hills	344	432	Port Austin	517	503
Montague	1,099	887	Port Hope	313	298
Montgomery	313	277	Portland	2,247	1,902
Montrose	675	621	Port Sanilac	204	147
Morenci	1,845	1,773	Posen	239	219
Morley	366	322	Pottersville	547	492
Morrice	452	370	Powers	258	360
Mount Morris	2,237	1,982	Quincy	1,333	1,265
Muir	447	448	Ravenna	451	343
Mulliken	338	309	Reading	1,059	954
Nashville	1,279	1,249	Reed City	1,845	1,792
Newaygo	1,282	1,227	Reese	569	490
New Baltimore	1,434	1,148	Richland	327	304
New Buffalo	1,190	1,051	Richmond	1,722	1,493
New Haven	904	774	Riverview	804	743
North Adams	496	457	Rockford	1,773	1,613
North Branch	724	658	Rockwood	1,147	953
North Muskegon	1,694	1,370	Roscommon	619	412
Northport	606	577	Rose City	355	338
Oakley	270	218	St. Charles	1,300	1,463
Oak Park	1,169	1,079	Saline	1,227	1,009
Olivet	604	566	Sand Lake	365	358
Omer	295	216	Sandusky	1,512	1,305
Onaway	1,449	1,492	Saranac	849	729
Onkama	340	325	Saugatuck	628	606
Onsted	414	375	Schoolcraft	823	833
Ontonagon	2,290	1,937	Scottville	1,162	1,002
Orchard Lake	295	178	Sebewaing	1,598	1,441
Ortonville	622	553	Shelby	1,367	1,152
Otisville	534	450	Shepherd	852	839
Otter Lake	515	336	Sheridan	542	530
Ovid	1,248	1,131	Sherwood	281	282
Owendale	296	246	Shoreham	225	
Oxford	2,144	2,052	South Lyon	1,017	844
Parchment	934		South Range	918	1,120
Parma	575	613	Sparta	1,945	1,939
Paw Paw	1,910	1,684	Spring Lake	1,329	1,271
Peck	381	372	Springport	502	562
Pellston	562	810	Stambaugh	2,081	2,400
Pentwater	820	772	Standish	981	803
Perrinton	385	373	Stanton	908	955
Perry	879	835	Stanwood	182	160
Petersburg	789	705	Stephenson	612	447
Pewamo	415	392	Sterling	350	279

660 1940 CENSUS FIGURES

	<i>Population</i>			<i>Population</i>	
	<i>1940</i>	<i>1930</i>		<i>1940</i>	<i>1930</i>
Stevensville	382	271	Vermontville	564	581
Stockbridge	852	715	Vernon	507	496
Sunfield	348	339	Vicksburg	1,774	1,735
Suttons Bay	470	439	Waldron	424	397
Sylvan Lake	1,041	799	Walkerville	250	250
Tawas City	1,075	1,034	Warren	582	515
Tekonsha	636	595	Watervliet	1,193	1,207
Thompsonville	324	295	Wayland	1,005	1,013
Three Oaks	1,351	1,336	Webberville	508	488
Turner	182	159	West Branch	1,962	1,164
Tustin	232	253	Westphalia	386	328
Twining	178	189	White Cloud	811	615
Ubyly	597	480	Whitehall	1,407	1,394
Union City	1,339	1,104	White Pigeon	1,017	966
Unionville	500	478	Whittemore	420	361
Utica	1,022	873	Williamston	1,704	1,458
Vandalia	360	373	Wolverine	257	300
Vanderbilt	405	456	Woodland	402	407
Vassar	2,154	1,816	Yale	1,489	1,345

Index

- Abbas, Phillip, 340
Abel (schooner), 516
 A. C. Spark Plug Plants, 300-301
 Ada, 443
 Adair Promontory, 574
 Adams, Elizabeth, ix
 Adams, Henry Carter, 183
 Adams, Herbert, 249
 Adams, Dr. Randolph G., ix
 Addison, 503, 508, 656
Administrative Organization of . . . Michigan, 53
 Adrian, 166, 507-8, 655
Adventures and Confessions, 151
Adventures in Contentment, 148
Adventures in Friendship, 148
Adventures of Paul Bunyan, The, 146
Afterwalker, 150
 Agassiz, Alexander, 588; Park, 588
 Agate Falls, 567, 593
 Agate Harbor, 585
 Agricultural products: asparagus, 406; beans, 7, 60, 367, 442, 446, 475, 476, 489, 490; celery, 7, 59, 60, 106, 322-3, 391, 401, 403, 406, 443, 448, 477, 513, *illus.* 526 f.; chicory, 60, 476, 489; corn, 59, 60, 442; flax, 476; ginseng, 411; grain, 59, 60, 401, 412, 443, 445, 446, 448, 451, 457, 475, 476, *illus.* 526 ff.; hay, 7, 59, 60, 476; melons, 60, 406, 442; onions, 8, 60, 401, 406, 448, 502, 513, 514; peppermint and spearmint, 7, 60, 323, 401, 403, 405, 406, 411, 419, 446; potatoes, 8, 59, 60, 445, 494, 513; rhubarb, 479; soy beans, 219, 223, 390-91; squash, 26, 442; sugar beets, 8, 59-60, 111, 200, 201, 203, 367, 444, 445, 446, 454, 455, 476, 488, 489, 498, 499, *illus.* 526 f.; wormwood, 411; *see also* Agriculture, Fruit
 Agriculture, 7-8, 10, 59-60, 87-8, 365-6, 446, 596; Farmers' Roundup, xxxvi; Farmers' Week, xxxiii, 328, 340; immigrants in, 105-7; Indians, 26, 30, 409, 442; land reported unfit, 47, 238; ribbon (strip) farms, 236, 463, 467, *illus.* 526 f.; *see also under* Marshes
 Ahgosa (Indian chief), 531
 Ahmeek, 587, 656
 Aiken, William Martin, 369
 Air lines, xxii
 Air ports: Ann Arbor, 177; Battle Creek, 192; Bay City, 489; Benton Harbor, 204; Dearborn, 211, 225; Detroit, 228; Flint, 296, 297; Grand Rapids, 305; Grosse Ile, 228, 474, 641; Holland, 316; Kalamazoo, 321; Lansing, 328; MacKinac County, 380; Marquette County, 343; Muskegon, 350; Sault Ste. Marie, 374; Wayne County, 228
 Aitken, Robert, 487
 Akockis (Indian leader), 473
 Akron, 656
 Alabaster, 64, 469, 488
 Alanson, 518, 656
 Alba, 509
 Alberta, 595
 Albion, 94, 401, 655
 Alger, Gov. Russell A., 52, 247, 465, 496
 Alger, 496; County, 17
Algic Researches, 145
 Algonac, 122, 448, 451, 452, 656
 Alicia, 446
 All-Metal Products Plant, 471
 Allegan, 514, 655
 Allen, John, Ann, and James Turner, 180
 Allen, Roger, 313
 Allen Park, 655
 Allouez, Father Claude Jean, 35, 582, 588, 617, 629
 Allouez, 588
 Alma, 94, 499, 655
 Almont, 477, 656
 Aloha, 483; State Park, 483, 492
 Alpena, 65, 80, 123, 159, 481, 484, 485, 486, 496, 655; winter carnival, xxxiii; County, 486
 Alpha, 656
 Alhadelphia Phalanx, 71

- Alten, Mathias J., 140
 Ambassador Bridge, 229, 242, 270,
illus. 214 f.
American Beaver and Its Works, 565
American Boy, The, 148
American Champion (sailing vessel),
 472
 American Federation of Labor, 75-81
 American Fur Trading Company, 165,
 376, 619, 625
 American Legion Hospital, 403
 American Negro Emancipation Day,
 xxxiii, 297
American Odd Fellow, 419
 American Railway Union, 76
 American Road Makers' Association,
 58
 American Territorial Assembly, 632
 Ames, Harriet Howe, 370
 Amygdaloid Island, 613
 Anchor Bay, 453
 Anchorville, 453
 Anderson, James, 168, 245
 Anderson, Julia, 242
 Anderson Lake Camp Grounds, 576
 Angell, James Burrill, 95, 182, 184
 Ann Arbor, xxxiii, xxxiv, xxv, xxxvi,
 47, 48, 71, 93, 94, 100, 105, 137,
 140, 154, 155, 163, 166, 177-91, 201,
 399, 400, 489, 491, 635, 639, 655;
 map, 189
Anne, 145
 Annual Builders' Show, xxxiii
 Ansley, Jim, 499
Antelope (schooner), 126
 Anthony, Wilfred E., 167
 Antrim, 509-10; Iron Company, 509-
 10, 602, 608
 Apple Show and Horticultural Con-
 vention, xxxvi
 Applegate, 656
 Arbre Croche, 516, 517
 Arbutus Beach, 494
 Arcadia, 534
 Arch Rock, 617, 620, 621, 624
 Archeology, 24-33; bibliography, 647
 Architecture, 164-73; *see various cities*
 Arkadelphia Association, 404
 Arkansas, 48
 Armada, 656
 Armstrong, Paul, 163
 Art and artists, xxxvi, 135-44, 162, 169,
 231, 348-9; colonies, 143, 528; Cran-
 brook Academy of Art, 142, 143,
 436, 437-8, *illus.* 244 f.; Detroit
 Art Center, 253-61; Detroit Artists'
 Market, 144; Detroit Arts and
 Crafts Society, 143, 162; Detroit
 Institute of Arts, 234, 266, 465;
 figureheads, 134; Grand Rapids
 Art Gallery, 312-13; Hackley Art
 Gallery (Muskegon), 142, 356;
 Kalamazoo Institute of Arts, 142,
 326; Meininger Foundation Art
 School, 143; Michigan Artists' Ex-
 hibition, xxxvi, 138, 231; Pewabic
 Pottery, 141, 261; puppets and
 marionettes, 136; Rembrandt Ex-
 hibition, 141, 142, 254, 256; Uni-
 versity of Michigan Art Collection,
 142, 143; Wicker School of Fine
 Arts, 139
 Art Festival and Artists' Ball, xxxv
 Arthur, Helen, 163
 Ashley, 656
 Ashton, 512
 Askin, John, 258
Asking Price, The, 147
 Aspirin, manufacture of, 431
 Assinins, 594, 595
 Astor, John Jacob, 376, 618-19, 625-6,
 634, Astor House, 165, 625, 626
 Athens, 409, 656
 Atlantic, 592
 Au Gres, 488, 656; River, 487
 Au Sable, 487; River, 18, 61, 480, 487,
 495, 496, 561; *illus.* 602 f.
 Au Train Lake, 563
 Au Train River and Falls, 563, *illus.*
 620 f.
 Audubon, John J., 302, 319
Audubon, 150
 Augusta, 404, 656
Augusta (schooner), 119
Auswanderer Wegweiser, Der, 104
 'Authors and Wolverines,' 147
 Automobile industry: assembly line,
 303-4; Auto Show, xxxvi; begin-
 nings, 217, 262, 284, 351; immi-
 grants, 103, 108, 110; labor, 77-81,
 241, 299-300; licenses, 58; literary
 theme, 150; manufacture, 68, 77,
 232, 298, 505; parts, supplies, etc.,
 67, 68, 201, 207, 267-8, 302, 336,
 428, 506, 511; production, 88, 300;
illus. 214 f. and 338 ff.; *see also*
under Detroit, Flint, Lansing, etc.,
 and Buick, Ford, General Motors,
 etc.
 Averill, 430, 432
 Avon Hall of Relics, 479
 Babbitt, Reuben, 495
Backfurrow, 148
 Bad Axe, 475, 476, 655
 Bad River, 446

- Bagley, Amasa, 426
 Bagley Memorial Fountain, 169
 Bagley's Corners, 426
 Bailey, Lake, 585
 Bair Lake, 410
 Baker, Ray Stannard, 148
 Baldwin, Gov. Henry B., home, *illus.* 58 f.
 Baldwin, 434, 656; Trout Rearing Pond, 434
 Baldwin's Prairie, 399
 Ballard, Arden, 390
 Balmer, Edwin, 147
 Bancroft, 656
 Bangor, 656
 Banks (village), 199
 Banks, 44-5, 49; holiday, 641; Kensington Bank scandal, 417; robbers, 449
Bannockburn (freighter), 121, 122
 Baraga, Bishop Frederick, 347, 348, 594, 595
 Baraga, 32, 592, 594-5, 656; County, 14, 595; State Park, 595
 Barasconi, Peter, 246
 Barbour, Levi B., 183, 250
 Bark River, 544
Bark Shanty Times, 458
 Barlow, Myron, 139, 276
 Barnes, E. H., 140
 Barnes-Hecker Mine, 565, 641
 Barney's Lake, 607
 Baroda, 656
 Barrett, Lawrence, 157, 158
 Barry, Thomas, 75
 Barryton, 657
 Base Line Superhighway, 424
 Bass Festival, xxxv
 Bates, Judge Frederick, 44
 Bates, Capt. Joseph, 193
 Battle Creek, 7, 58, 67, 75, 76, 91, 108, 171, 192-7, 399, 402, 403, 409, 421, 514, 655; map, 196; Sanitarium, 194, 197
 Battleship Cave, 573; Rock, 574
 Bay City, 65, 74, 87, 107, 163, 165, 187, 198-203, 454, 480, 485, 489, 512, 655; map, 202, State Park and Fish Hatchery, 203, 489
 Bay County Building, 201; Historical Society Museum, 201
 Bay Mills Community, 32
 Bay Mills Indian Mission, 379, 556
 Bay Park, 454
 Bay Port, 454, 455
 Bay View Assembly, 518
 Beach, Lewis, 163
 Beach, Rex, 147
 Beal's Lake, 520
 Beals Nursery, 488
 Bear Cave, 412
 Bear Lake, 352, 524, 657; Village, 524
 Beauharnois, General, 630
 Beaumont, Mr. and Mrs. John, 341
 Beaumont, Dr. William, 625
 Beaver Archipelago, 208, 516, 602-9
 Beaverdam, *illus.* 620 f.
 Beaver Island, 19, 105, 120, 516, 519, 520, 601-9; *see also* Mormons
 Beaver Lake, 574
 Beaverton, 432
 Beckley, Rev. Guy, 190
 Bedford, 402
 Beebe's Corners, 459
 Beecher, Henry Ward, 393
 Beet sugar industry, *see under* Agricultural products
 Begole, Gov. Josiah W., 52, 639
 Belding, 443, 513, 655
 Bel Geddes, Norman, 163
 Bellaire, 657; Lake, 520
 Belle Isle, 153, 224, 234, 248-52, 280, 610, 613, 635; bridge, 229, 248; yacht basin, *illus.* 120 f.
 Belle River, 449, 451
 Beller, Jacob, 157
 Belleville, 657
 Bellevue, 657
Belly Fulla Straw, 149
 Bendix, Max and Wilhelm, 152
 Benton Harbor, xxxvi, 91, 204-10, 399, 405, 406, 515, 527, 528, 530, 640, 655; *illus.* 432 f. and 526 f.
 Benzie State Park, 534
 Benzonia, 524
 Bercovici, Konrad, 484
 Bergland, 567
 Berkey, Julius and William, 310
 Berkley, 425, 655
 Berlin, *see* Marne
 Berrien County, 19
 Berrien Springs, 194, 530, 657
 Berry Brothers Estate, 444
 Bessemer (village), 655
 Bête Grise, 584; Bay, 14
 Beulah, xxxiv, 523-4, 657
 Bewabig Park, 547
 Bidasiga (Indian chief), 518
 Biddle, Maj. John, 137, 470
 Biddle's Point, 626
 Big Bay de Noc, 122, 541, 542
 Big Beaver, *see* Beaver Island
 Big Bradford Lake, 495
 Big Prairie, 447
 Big Rapids, 508, 512-13, 655
 Big Sable River, 435

- Big Sand Bay, 602, 609
 Big Spring, 541
 Big Twin Lake, 510
Bigler (schooner), 130
 Bingham, Kingsley S., 417, 505
 Bingham, 531
 Birch Run, 490
 Birds, 23, 412
Birds of America, 302
 Birmingham, 426, 655
 Bitter, Karl, 184
 Black Hawk (Indian chief), 410
 Black Hawk War, 360, 397
 Black Lake, 482, 483
 Black Legion, 241
 Black River, 316, 317, 320, 360, 361, 443, 482, 529, 549
 Blair, Gov. Austin, 336, 505
 Blake, Eleanor, 149
 Blaney Park, 539, 561
 Blashfield, Edwin, 257, 258
Blazed Trail, The, 147
 Blessing of the Blossoms, 521
 Blissfield, 657
 Bloomfield Hills, 426, 435, 657
 Bloomingdale, 657
 Blossom Festival, 205, 207
 Blue Water International Bridge, 360, 364, 642; *illus.* 214 f.
Bluebird (speedboat), 451
 Boardman Lake, 522; River, 510, 522
 Boating, xxx
 Bob-Lo (Bois Blanc) Island, 473, 481
 Bond, C. V., 137
 Bond Falls, 593
 Bonstelle, Jessie, 160, 161
 Bonz Landing, 483
Book of Travels, 87
 Boorsma, Jan, 139, 143
 Booth, Ellen Scripps, 95, 435; George G., 95, 435, 437; Henry Scripps, 437
 Botsford Tavern, 414
 Bottles, collection of, 418
 Bovie, Dr. William T., 404
 Bowd-Munson, 332
 Bowles, Charles, 241
 Bowman, James Cloyd, 146
 Boyne City, xxxiv, 509, 655
 Boyne Falls, 509; River, 509
 Bradford Lake, 494
 Bradish, Alvah, 137
 Bradley, 513; Indian Settlement, 513
 Brady, Gen. Hugh, 634
 Brampton, 577
 Branch, 434; County, 395; River, 211
 Breakey, Dr. James R., 390
 Breckenridge, 657
 Breedsville, 657
 Brees, Anton, 436
 Brevort, 538
 Brewster Area, 173
 Bridgeport, 490
 Bridgman, 407, 657
 Brighton, 413, 418, 657
 Brimley, 557; State Park, 379, 556
 Briscoe, Benjamin, 291
 British colonial interests, 4, 26, 37, 38, 39, 40, 41, 42, 43, 46, 113, 165, 235, 236, 237, 298, 360, 374, 387, 430, 450, 461, 472, 473, 481, 617, 625
 British Landing, 620, 623
 Britton, 657
 Brock, General, 633
 Brockway, *see* Yale; Mountain Drive, 584
 Bronson, Jabez, 396
 Bronson, Titus, 322
 Bronson, 45, 322, 396, 657; Harbor, 206; Park, 326
 Brooklyn, 657
 Brotherhood of Locomotive Engineers, 72
 Brown, Henry D., ix
 Brown, John, 239
 Brown City, 477, 657
 Brozik, Jaroslav, 141
 Bruce Crossing, 567, 581, 593
 'Bruin,' *illus.* 620 f.
 Brulé, Etienne, 25, 34, 373, 374, 376, 612, 629
 Brunnow, Dr. Franz, 183, 190
 Brutus, 517
 Bryant, Clara, 216
 Buchanan, 412, 655
 Buckley, 657
 Bucklin, A. J., 213
 Budd Lake, 498
 Buick, David, 231, 262, 352
 Buick Motor Company, 262, 297, 298, 299, 300, 640
 Bulgarians, 231
 Bull Moose, *illus.* 620 f.
 Bunyan, Paul, 104, 120, 146, 366, 432
 Burbank, Luther, 226
 Burcham, D. Robert, 330
 Bureaus: Census, 32, 69, 181, 427; Criminal Identification, 338; Fisheries Research, 85; Indian Affairs, 32-3; Labor, 74; Labor Statistics, 52; *see also* United States
 Burlington, 408, 657
 Burnett, William, 206
 Burnham, T. H. O. P., 137
 Burnham's Bay, 484
 Burnside, 476

- Burnt Bluff, 31
 Burr Oak, 657
 Burroughs, William Seward, 276
 Burrows, Marcus R., 293
 Burt, William A., 345, 478, 636
 Burt Lake, 492, 518; State Park, 492
 Burton, Clarence M., 243, 258; Endowment Fund, 258; Historical Collection, 137, 243, 258
 Burton, Marion Leroy, 183, 188
 Burton, William E., 157
 Bus lines, xxi
 Butman, Mrs. Myron, 370
 Butman-Fish Memorial Library, 370
 Butterfield, Wells D., 293
 Byers, Abe, 540
 Byron, 657
- CCC Camps, 379, 403
 CIO, 78-81, 110, 300, 642
 Cable Bay, 602
 Cadillac, Antoine de la Mothe, 36, 89, 104, 138, 213, 235, 238, 244, 245, 271, 381, 466, 473, 475, 481, 511, 617, 630
 Cadillac, 16, 508, 511, 655; Lake, 511; Municipal Bldg., 169; Square, 244; Viking Water Festival, xxxv; Winter Carnival, xxxiii
 Cadillac Motor Car Company, 272, 299, 640
 Cahokia, 40
 Calder, Olivia, 141
 Caledonia, 657
 Calhoun County, 93
 Callahan, Dr. Phillip A., 101
 Calumet, 14, 63, 581, 588, 657
 Calumet and Hecla Consolidated Copper Co., 588, 638
 Calvin Center, 410
 Cambridge Junction, 392
 Camden, 657
 Camps: Gitchee Gumee, 587; Kitanina, 402; Nissokone, 487; Skeel, 486; Sokol, 407
 Campau, Antoine, 430
 Campau, Barnabas, 249
 Campau, Louis, 307, 311, 366
 Campbell, Anne, 149
 Campbell, Capt. Donald, 37
 Campbell, Sir Malcolm, 451
 Camping, xxvii
 Canada, 39, 41, 42, 229, 239, 361, 366, 373, 402, 448, 449, 469, 474, 481; customs regulations, 242, 643
 Canadian Constitutional Act (1791), 236; Indian reservation, 451; Montreal Trail, 56; Patriotic War, 456
 Canneries, 8, 391, 422, 439, 514, *illus.* 526 f.
 Canoe Carnival, xxxv
 Canoeing, xxx
 Capac, 439, 657
 Capital punishment, 245, 388
 Capitol, first, 634; at Lansing, 312
 'Cappy Ricks,' 559
 'Car 99,' 149
 Carabelli, Joseph, 356
 Caribou Lake, 552
 Carleton, Will, 146, 508
 Carleton, 657
 Carnegie, Andrew, 302, 362; Foundation, 201; Library, 376
 Caro, 445, 655
 Carp Lake, 516; Mine, 601; Village, 516
 Carp River, 344, 345, 348, 601
 Carriage and wagon factories, 298, 331, 428
 Carriagemen's Association, 616
 Carroll, John, 140, 142, 254, 256
 Carson City, 657
 Carsonville, 657
 Carter, Daniel, 485
 Carver, Jonathan, 582
 Cascade, 420, Lake, 478
 Case, Nathan C., 203
 Caseville, 456, 657
 Cashwan, Samuel, 141, 144, 266, 433
 Casnovia, 657
 Caspian, 657
 Cass, Gen. Lewis, 4, 46, 47, 137, 182, 237, 245, 248, 298, 346, 366, 374, 376, 402, 418, 424, 427, 445, 461, 473, 474, 571, 598, 621, 633, 634, 636, 637, Monument, 620
 Cass City, 657; County, 108, 109, 146, 406, 410, 411; River, 18, 31, 445, 476, 490
 Cass Cliff, 621, 624; Park, 620
 Cassara, Frank, 144
 Cassopolis, 411, 514, 657
 Castle Rock, 537
 Catholepistemiad, 92-3, 634
 Catholic Point, 451
 Caulkins, Horace J., 141, 257
 Cave with the Iron Ring, 574
 Cavelier, René Robert, *see* La Salle
 Cedar Lake, 486, 531
 Cedar Point, 229
 Cedar River (village), 578
 Cedar River, 432, 578
 Cedar Springs, 513, 657
 Cedarville, 551, 554
 Cement, 395, 454, 485, 490
 Cemetery Island, 614

- Census, ix; *see also* Population
Census of Manufacturers, 68
 Centennial: Exposition, 638; Michigan (1935), 641
 Centerline, 480, 655
 Centerville, 398, 410, 657
 Central Lake, 657; Village, 520
 Cereals, 7, 59, 67, 193, 394
 Chamberlain, Henry, 412; Memorial Museum, 412
 Champion, Albert, 298
 Champion, 566
 Champlain, Samuel de, 34, 373, 603, 629
 Chandler, Zachariah, 505
 Chandler Brook Deeryard, 576
 Chandler Park Project, 173
 Chanteys and songs, 123-34, 152
 Chapel Beach, 574; Rock, 574
 Chappeé, Louis, 579
 Charity Island Reef, 203
 Charles Mears State Park, 526
 Charlevoix, Pierre François Xavier de, 519
 Charlevoix, 515, 519-21, 601, 602, 657; Coast Guard station, 520; Lake, 509, 519, 520
 Charlotte, 491, 500-501, 655
 Chase, Lew A., ix
 Chase, 433
 Chassell, 594
 Chateau Voyageurs Club, 474
 Chatham, xxxvi, 563
 Cheboygan, 131, 480, 482, 491, 492, 656; County, 492; River, 480, 482
 Cheboyganing Creek, 489
 Chelsea, 400, 657
 Chenal Escarta, 451
 Cheney, Sheldon, 162
 Cherry Creek Fish Hatchery, 349, 564
 Chesaning, 657
 Chevrolet, Louis, 262
 Chevrolet Motor Car Co., 262, 297, 300, 303, 367, 640
 Chicago, 67, 87, 114, 115, 238, 284, 407, 492, 636; Road, 214; Treaty, 634; Turnpike, 387, 392, 393, 395
 Chicago Commons, 407
 Chicaugon Lake, 547
Chicora (steamer), 128
Child and Country, 148
Child of the Sea, A, 606
 Child welfare, 52, 74-5, 98-101; institutions, 99, 100, 136, 142-3, 153, 258-9, 338, 414, 459, 502; *see also* Education
 Chimney Rock, 617, 623
 Chippewa Harbor, 610; Hill, 549; River, 431
 Chocoday River, 564
 Cholera, 96, 249, 388, 635
 Chris Craft Plant, 451
 Christian Reformed Church, 91, 315, 319, 637
 Christiansen, A. B., ix
 Chrysanthemums, xxxvi, 507
 Chrysler, Walter P., 79, 291, 298, 643
 Chrysler Corporation, 79, 80, 81, 95, 154, 172, 219, 265, 275, 278, 279, 286, 291, 292, 293, 449, 643
 Church, Frederick S., 140
 Church Hill Weather Tower, 609
 Churches, 89-92, 105
 Baptist: Fountain Street, 169, 312, Holly, 167; Mission, 307
 Christian: Central Woodward, 167, Old First, 319
 Congregational: Clinton, 391; First, 169
 Methodist Episcopal: Albion, 401; Northville, 415
 Methodist Protestant: Central, 247; First, 440
 Presbyterian: First, 154, 169; Fort Street, 167, 270; Marquette, 347; Monroe, 463; Old Mission, 165, 623; Pontiac, 427; Ypsilanti, 389
 Protestant Episcopal. Christ, 436; Grace, 394, Mariners, 242-3; St. Paul's (Detroit), 154, 167, 261, 266; St. Paul's (Muskegon), 356; St. Peter's, 391
 Roman Catholic: Blessed Sacrament, 277; Holy Cross (Beaver Island), 609; Holy Cross (Cross Village), 516; Holy Cross (Marine City), 450; St. Aloysius, 169, 246; St. Ann's, 620, 630, 632; St. Anne's, 89, 137, 152, 271; St. Casimer's, 484; St. Florian's, 288; St. Ignatius, 382; St. Joseph's, 392; St. Mary's (Monroe), 463; St. Mary's (Port Sanilac), 444; St. Mary's (Westphalia), 420; Ss. Peter and Paul's, 167, 269; St. Peter's, 347
 Other denominations: Community, 406; Martha-Mary, 226; Moravian, 455, 460; People's, 339; Richville Lutheran, 445; St. John the Baptist, 154; Seventh-Day Adventist, 91; Temple Beth El, 276
 See also various denominations
 Cincinnati Arch, 15
 Cissne, John, 213

- Cities (bibliography), 652
 Citizens' Alliance, 76, 77, 310
 Citizenship Bureau, 291
City of Alpena (steamer), 127
City of Detroit (steamer), 122
City of Green Bay (schooner), 128
 Civic Auditoriums: Grand Rapids, 159, 311, 312; Kalamazoo, 326
 Civil Rights Bill, 109
 Civil Service Bill ('Ripper'), 642
 Civil War, 62, 63, 113, 158, 168, 169, 193, 214, 239, 244, 271, 333, 357, 361, 364, 406, 410, 416, 456, 467, 562, 624, 637; *see also* Underground Railroad
 Clam Lake, 520
 Clare, 423, 430, 432-3, 491, 492, 498, 657, *illus.* 526 f.; County, 433, 497
Clarion (steamer), 122
 Clark, Darius, 542
 Clark, Frank, 337
 Clark, George Rogers, 40
 Clarkston, 657
 Clarksville, 657
 Clawson, 656
 Clay, Henry, 391
 Clay, 16, 64, 65, 395, 419
 Clayton, 657
 Clear Lake, 402, 584
 Clegg, John and Thomas, 639
 Clements, William L., 187, 201, 489; Library of American History, ix, 186-7, 641
 Cleveland, Ohio, 79, 114, 115, 284
 Cleveland Cliffs Iron Co., 172
 Cliff Mine, 63, 587, 636, 637
 Clifford, 657
 Climate, *see* Weather
 Climax, 657
 Clinch Park, 522
 Cline, Leonard, 149
 Clinton, 167, 391, 657; County, 420; River, 40, 429, 460, 479
 Clinton-Kalamazoo Canal, 49, 460, 479
 Clo, 657
 Cloud, Rev. Charles H., 281
 Coal, 8, 16, 200, 201, 344, 367, 419, 441, 446, 451, 455, 636, *illus.* 214 f.; *see also* Mining
 Coast Guard, *see* U. S. Coast Guard
 Coffinberry, W. L., 29
 Cohen, Frederick, 137
 Cohn, Harold, 141
 Coldwater, 99, 214, 387, 395-6, 408, 491, 502, 656; Lake, 502; River, 395; State Home and Training School, 99, 100, 502
 Coleman, 657
 Cole's Sawmill, 609
 Coloma, 406, 657
 Colon, 657
 Colored Caves, 573
 Columbiaville, 657
Come on Home, 149
 Comfort, Will Levington, 148
Commercial Advertiser (New York), 237
 Committee for Industrial Organization, *see* CIO
 Communism, 235
 Company of the Colony of Canada, 36
 Comstock, Addison J. and Darius, 507
 Comstock, C. C., 310
 Comstock, Gov. William A., 641
 Comstock, 404
 Concord, 657
 Conference for the Protection of Civil Rights, 92
 Conglomerate Falls, 550
 Conklin, Isaac Newton, 390
 Conrad, Lawrence, 150
 Conservation, 82-6
 Consolidated Press Company, 172
 Constantine, 515, 657; Co-operative Creamery, 515
 Constitution (1835), 48; (1850), 50, 637; (1907), 52, 640
 Consumers Power Company, 512-13
 Continental Motors Corp., 353
 Convention of Assent, 48, 635
Conveyor, 150
 Conway, 518
 Cook, William W., 185, 186
 Cook's Run Trout Rearing Station, 548
 Cooley, Thomas McIntyre, 183
 Coolidge and Hodgson, 169
 Cooper, James Fenimore, 145, 392, 404, 514, 528
 Co-operatives, 75, 106, 111, 203, 391, 404, 446, 455-6, 514, 640
 Coopersville, 422, 657
 Copemish, 657
 Copper, 3, 5, 6, 8, 14, 17, 29, 30, 34, 50, 76-7, 107, 122, 123, 239, 344, 581-2, 586, 598, 611, 612, 636, 639, 640; *see also* Mining
 Copper City, 657
 Copper District Power Company, 598
 Copper Falls Mine, 586
 Copper Harbor, 583
 Corbett, Sidney, 149
 Cornwell's Ranch, 498
 Corrothers, James David, 146
 Corunna, 441, 657
 Cosmopolitan Club, 213

- Cosmopolitan Women's Club, 213
 Cotswold cottage group, 226
 Coughlin, Father Charles E., 91, 425
 Counterfeiting, 457
Coueurs de bois, see *Voyageurs*
 Couzens, Sen. James, 99, 173, 218, 240, 241
 Coveney, Joseph, 412
 Covington, 566
 Cozens, Isaac and Sophie, 276
 Cram, Goodhue, and Ferguson, 167, 261
 Cramton Park, 440
 Cranbrook Foundation, 95, 143, 295, 426, 435-8, 641
 Cranbrook Institute of Science, 436, 438; *illus.* 244 f.; see also Art, Education
 Cranbrook Lake, 438
 Crane, C. Howard, 274
 Crary, Gen. Isaac E., 93, 402, 635
 Cret, Paul, 141, 253
 Cret, Zantzinger, Borie and Medary, 170
 Cromaine Craft Community Center, 143; Highway Shop, 491
 Cromaine Library, 491
 Crooked Lake, 518; River, 518
 Cropsey, Jasper F., 137
 Cross Village, 516-17
 Crosses Bluff, 607, 608
 Crosswhite, Adam, 401-2
 Crosswell, 657
 Croton, 447
Cruise of the Gull-Flight, The, 149
 Crystal Falls, 546, 656; Bass Festival, xxxv
 Crystal Lake, 523-4, 534
 Crystallia, 534
 'Curfew Shall Not Ring Tonight,' 146
 Curtis, Glenn H., 209
 Curtiss-Wright race, 459
 Curwood, James Oliver, 147, 441, 597
 Curwood Lakes, 597
 Cusino State Game Refuge, 559, 562, 575
 Custer, 657
 Cut River, 538
 Czolgosz, Leon, 560
 Dablon, Father Claude, 598, 617
 Dabo, Leon and Theodore Scott, 140
 Daggett, 657
 Dairying, poultry, and livestock: cattle-raising, 418, 429, 433, 444, 445, 476, 477, 498, 500, 511, *illus.* 526 f.; chicks, 106, 318, 442, 443-4; dairy products, 8, 59, 60, 68, 106, 400, 408, 412, 418, 422, 432, 444, 445, 447, 485, 488, 489, 494, 512, 513, 514, 515, 579, 596, 605; feed for cattle, 457; livestock raising, 7, 60, 429, 444, 476, 477, 485, 498, 500, 511; meat, 8, 68; sheep, 401, 459, 500, 501
 Dansville, 657
 d'Arcambal, Agnes, 413
Dark Chamber, 149
 Darragh, 510
 Daughters of the American Revolution, 291, 326
 Daumont, Simon, 629
 Davis, Mr. and Mrs. D. S., 501
 Davis, George S., 268
 Davison, 441, 657
 Day State Park, 533
 Dead River, 344
 Deanville Mountain, 477
 Dearborn, Gen. Henry, 213
 Dearborn, xxxiv, 109, 135, 163, 211-27, 290, 294, 387, *illus.* 244 ff.
 Dearborn Colony, 494
Dearborn Independent, The, 215
 Dearbornville, 227
 De Bruin, Marinus, 323
 Decator, 657
 Deckerville, 657
 Deer, 448; hunting, 23, 595, *illus.* 630 f.
 Deer Lake, 565
 Deerfield, 657
 DeJong, David Cornel, 149
 de Kruif, Paul, 98, 150, 318
 DeLamarter, Eric, 155
 de la Richardie, Father, 473
 Delaware, 584
 Delray, 29, 111, 234
 Delta County, 23, 107
 Democrats, 635
 Denby, Edwin, 247, 266, 641
 Densmore, Frances, 27
 de Peyster, Col. Arent Schuyler, 40
 Desor, Lake, 614
 De Soto Plant, 275
 Des Rosiers, Arthur, 427
 De Tour, 552, 657
 Detroit, 10, 44, 68, 70-79 *passim*, 93-4, 96, 103, 104, 107-12, 136-44, 151-5, 157, 158, 160-62, 229-82, 388, 423, 424, 467, 617, 641, 655; automobile industry, xxxvi, 2-10, 57, 68, 150, 216-18, 231-4, 241-2, 261-4, 265, 272, 275, 277-9; bibliography, 652; Boat Club, 252; Builders' Show, xxxiii; Children's Museum, 142, 258-9; Convention

- and Tourist Bureau, 87; *Daily Advertiser*, 70; Dog Show, xxxiv; Downtown Library, 245; East Detroit, 460, 656; Easter Lily Show, xxxiv; Edison Co., 216; Firemen's Field Day, xxxvi; Flower Exhibition, xxxiv; *Free Press*, 72, 73, 158; fur trade, 39, 235, 238; *Gazette*, 47, 237, 238; government, 54, 73, 234, 235, 240-41; history, 9, 36-48, 59, 89, 231-42, 473, 630; Historical Society, 243; housing project, 173, 264-5, 273-4; industries, 64, 232, 239, 264-9, 276, 277, 460, 468, 469; map, *back pocket*; Mechanics' Society, 71; Memorial Day Parade, xxxiv; Memorial Park, 643; name, origin of, 233; New Center Group, 261-4; *News*, 171, 244, 250, 270; poets, 149; Police Field Day, xxxv; Public Library, 137, 143, 144, 169, 234, 243, 253, 256-8; Rodeo, xxxvi; Shrine Circus, xxxiii; Soda Products Plant, 471; Soldiers' and Sailors' Monument, 138, 244; State Capital, 44, 50, 632, 636; State Fair, xxxv, 279-80, 637; Steel Products Co., 172; Tigers, 234, 272, 640, 641; Tool Show, xxxiii; Treaty of, 45, 457, 633; welfare, 71, 73, 96, 97, 287, 400, 414; Windsor Tunnel, 229, 242, 264; Wyandots, 25, 470; Yacht Club, 252; Zoological Park, 424
- Buildings: Alger House, 465; arsenal, 214, 227; Buhl Bldg., 171; City Hall, 9, 137, 138, 168, 245, 435, 465, 468; Convention Hall, 274; Country Club, 465; Federal Bldg., 171, 244-5; Fisher Bldg., 171, 233, 263, *illus.* 432 f.; Majestic Bldg., 171; Naval Armory, 144, 266; Parker Bldg., 168; Penobscot Bldg., 171, 244; Y.M.C.A., 247, 487
- Detroit and Pontiac Railway, 635
- Detroit and Saint Joseph Railroad, 57, 70
- Detroit Automobile Company, *see* Ford
- Detroit River, 18, 114, 122, 131-3, 213, 228, 233, 242, 243, 248, 251, 267, 268, 283, 387, 426, 468-9, 472, 473, 630
- Detroit-Michigan Stove Plant, 267
- Detzer, Karl, 149
- Devil River, 486
- Devil's Bake Oven, 621
- Devil's Hole, 530
- Devil's Kitchen, 617, 623
- Devil's Lake, 507, 508
- Devil's Washtub, 585
- Dewey, Adm. George, 412
- Dewhirst, Judge Harry T., 207, 208
- De Witt, 657
- de Witte, Emanuel, 256
- Dexter, Judge Samuel W., 400
- Dexter, 400, 657
- Diamond Crystal Salt Plant, 450
- Diamond Match Co., 600
- Dickinson County, 14, 107; pike hatchery, 546
- Dickinson Island, 452
- Diggins Park, 511
- Diggs, Charles C., 109
- Dimitroff, Stephen Pope, 141
- Dimondale, 657
- Dirigibles, 474, 641
- Disco, 479
- Dix, Samuel, 417
- Dixie Fuel Terminal, 469
- Dr. Denton Sleeping Garment Mills, 410
- Dodge, Horace E and John F., 286, 411, 464-5, 552
- Dodge Brothers Company, 284, 286-7, 279, 640, 643
- Dodge Munuscong State Park, 379, 552
- Dollar, Robert, 559
- Dollar Bay, 589
- Dollar Island, 554
- Dollars of the World (collection), 347
- Dollarville, 559
- Dominican House of Studies, 578
- Donaldson, John M., 138
- Donaldson and Meier, 169
- Dorchester, Lord, 632
- Dorr, Harold M., ix, 53
- Dort, Josiah Dalles, 214, 299
- Dort, Titus and Josiah, 214
- Dougherty, Rev. Peter, 521, 531
- Douglas, 528, 657
- Douglas Lake, xxxv, 482, 517
- Douglass, Frederick, 239
- Dow, Alden, 172, 431
- Dow, Alex, 216
- Dow, Henry, 201
- Dow, Dr. Herbert H., 430-31
- Dow Chemical Company, 66, 430-31, 432; Housing Project, 432
- Dowagiac, 108, 411, 656
- Drama, *see* Theater
- Drayton Plains State Fish Hatchery, 429
- Driskel Lake, 410
- Drummond, Dr. W. H., 132
- Drummond, Sir Gordon, 553

670 INDEX

- Drummond, 553
 Drummond Island, 19, 32, 374, 379,
 551, 553, 633
 Dryden, 477, 657
 Duffield, Dr. Samuel P., 268
 du Luht, Sieur, *see* Greysolon, Daniel
 Duluth, Minn., 610
 Duncan Bay, 613
 Dundee, 467, 491, 657
 Dunes, Sand, 18, 58, 116, 206, 238, 320,
 357, 405, 407, 434, 435, 447, 528,
illus. 120 f.
 du Pont, Pierre S., 263, 299
 Durand, 656
 Durant, William Crapo, 9, 214, 217,
 231, 261, 262-3, 299, 428, 640
 Durant Motor Co., 336
 Durant-Dort Carriage Co., 214
 Durantaye, 381
 Duryea machine, 216
 Dutch, 106, 306, 317-18, 322, 443
 Dutch Reformed Church, 318, 319
 Dwight, Alfred, 417
 Dwight Lydell Hatchery, 315, 421
 Dwightwood Springs, 623, 624
 Dwyer, Jeremiah and James, 267
- E. C. Roberts* (schooner), 128
 Eagle, 420, 657
 'Eagle Boats,' 218
 Eagle Harbor, 585-6, 610
 Eagle Iron Works, 216
 Eagle River, 586, 587, 598, 613; Fuse
 Company, 587
 Earle, Horatio S., 58
 East Bluff, 624
 East Branch Falls, 597
 East Detroit, *see* Detroit
 East Jordan, xxxiv, 520, 657
 East Lake, 657
 East Lansing, *see* Lansing
 East Michigan Tourist Association, 87
 East Moran Bay, 380
 East Tawas, 487-8, 657; State Park, 488
 Easter Lily Show, xxxiv
 Eastmanville, 422
 Eastwood, 446
 Eaton, G. D., 148-9
 Eaton County, 500
 Eaton Rapids, 501, 656
 Eau Claire, 657
 Eben Junction, 563
 Eckerman, 568
 Ecorse, 466, 467, 469-70, 655; River,
 467, 469, 473
 Edenville, xxxv, 432; Lumberjack
 Museum, 203, 432
- Edison, Thomas A., 220, 225, 226, 361,
 460, 637
 Edison Illuminating Co., *see under* De-
 troit
 Edison Memorial Boulder, 364
 Edmore, 446-7, 657
 Education, 48, 92-6; bibliography, 650
 Academies: Adelphian, 490; Holland,
 317; Nazareth, 323; Romeo, 478;
 St. Mary's, 281, 462
 Colleges: Adrian, 507; Albion, 401;
 Alma, 499; Ashland, 358, 448;
 Battle Creek, 194; Calvin, 306,
 315; Central State Teachers, 94,
 499; Cleary, 390; Detroit College
 of Law, 247; Duns Scotus, 167;
 Emmanuel Missionary, 194, 530;
 Flint Junior, 302; Free Will Bap-
 tist, 394, 408; Hillsdale, 394; Hope,
 317, 318; Jordan, 580; Kalamazoo,
 172, 323-4; Lansing State College
 of Agriculture, 94, 144, 339-42;
 Marygrove, 281-2, *illus.* 244 f.;
 Mich. Central, 394; Mich. College
 of Agriculture, 94, 144, 145, 329,
 330, 332, 339-42, 404, 637; Mich.
 College of Mines, 94, 591, 639;
 Mich. Female, 330, 337; Mich.
 State Normal, 94, 144, 339, 389,
 637; Northern State Teachers, 94,
 146, 346; Olivet, 94, 151, 501-2,
 642; St. Joseph's, 507; Suomi, 590;
 Western State Teachers, 323, 324,
 405
 High schools: Cass Technical, 95,
 144; Copernicus Junior, 289; Edi-
 son Institute, 215; Highland Park,
 293, 299; Lansing Eastern, 337;
 Paw Paw, 143, 405
 Institutes: Ferris, 512; of technology:
 Detroit, 247; Edison, 135, 215, 225-
 6, *illus.* 224 f.; Lawrence, 294
 Schools: Brookside, 435, 436-7; Cran-
 brook, 172, 435, 437, 438, *illus.*
 244 f.; Detroit public schools, 239,
 292; Ford educational system, 220,
 391; Hamtramck public schools,
 285, 286, 288, 289; Kingswood,
 172, 436, 438; Merrill-Palmer, 95,
 253, 259; Mich. State Vocational,
 338; Pennington, 391; Tanglewood
 School and Home, 501
 Seminaries: Pine Grove, 514; West-
 ern Theological, 318
 Universities: Detroit, 94, 280-81;
 Marquette, 383, 434; Michigan, *see*
 University of; Wayne, 144, 163,
 234, 253, 260-61, 281, 287, 643

Education of an American, 151, 318
 Edwards, Gus, 158, 331
 Edwardsburg, 657
 Egg and Baby Chick Show, 444
 Egyptian Lotus Beds, 515
 Eis, Bishop Frederick, 348
 Elba Island, 474
 Elbamar, 474
 Elberta, 534, 657
 Eldred, Julius, 599
 Elizabeth Park, 472
 Elk Lake, 440, 520, 521; Rapids, 521,
 657; River, 521
 Elkart (Indian chief), 410
 Elkhart (Indiana), 399, 508, 515
 Elkton, 657
 Ellerheusen, Ulric, 436
 Ellsworth, 657
 Elsie, 657
 Embury, Aymar, 326
 Emerson, 568-9
Emigrant's Guide to . . . Michigan,
 104
 Emmett, 657
 Emmet County, 602, 604
 Empire, 534, 657
 Employers' General Association, 72
 Engadine, 539
 Epoufette, 538
 Epworth Assembly, 435
 Epworth Heights, 435
 Erie, Lake, 4, 16, 19, 46, 118, 122, 133,
 148, 228, 233, 461, 471, 473, 629,
 633
 Erie Canal 47, 56, 59, 104, 166, 238,
 252, 427, 472, 478, 500, 634
 Erie and Kalamazoo Railroad, 49
 Escanaba, xxxiii, xxxiv, xxxv, xxxvi, 64,
 75, 115, 128, 159, 543-4, 639, 655
Escanaba (cutter), 527
 Escanaba River State Game Refuge, 576
 Esrey Park, 585
 Essexville, 454, 657
 Estral Beach, 657
 Ethnic groups, *see* Racial elements
 Eureka Iron and Steel Co., 470
 Eurich, Frank, 293
 Evans, Musgrove and Abi, 391
 Evart, 657
 Evergreen Beach, 483
 Ewen, 567
 Explorers, 34, 55-6, 89, 103, 466, 473,
 595, 617
 Fairbanks, Avard, 140
 Fairgrove, 657
 Fairport, 542
 'Fake railroad' (Forest Hill), 499

Fallen Timbers, Battle of, 42, 236, 632
 Family Rocks, 624
 Fanny Hooe, Lake, 583
Far Lake, 149
 Fargo, 75
 Farm Security Administration, 400, 446,
 494
 Farmington, 414, 657
 Farnsworth, Jerry, 428
 Farrell, Mrs. Leslie, 578
 Farwell, Arthur, 340
 Farwell, 433, 497, 657
 Fauna, 22-3, 190, 611; bibliography, 647
 Faxon, J. L., 169
Fay (schooner), 122
 Fayette, 541
 Federal projects: housing, 173, 264,
 273, 351; refuge, 504
 Felch district, 13
 Fennville, 657
 Fenton, 490, 656; Community Center,
 171
 Ferber, Edna, 150
 Ferndale, 424, 655
 Ferris, Gov. Woodbridge M., 76, 77,
 512
 Ferrying, xxii, 121, 200, 298, 359, 360,
 372, 380, 381, 448, 451, 452, 474,
 481, 615
 Festivals, xxx
 Fife Lake, 510, 657
Fight for Life, The, 150
 Fighting Island, 470
 Filer, E. G., 525
 Filer City, 525
 Filion, 476
 Finnish co-operatives, 577
 Firemen's Field Day, xxxvi
 Fires: Au Sable, 487; Belle Isle Bridge,
 248; Dearborn, 227; Detroit, 5,
 44, 61, 164, 173, 236, 237, 252, 270,
 271, 290, 337, 449, 632; depicted
 on stage, 157-8; Forestville and
 Richmondville, 457; Fort Re-
 petigny, 374; Holland, 317; Italian
 Hall, 588; Jonesville, 394; Lans-
 ing, 336; Marquette, 345, 347; On-
 away, 483; Osceola mine, 589;
 Oscoda, 487; Rogers Dam, 512; St.
 Ignace, 383; Walloon Lake, 509.
 Forest fires, 82, 84-5; Forest Fire
 Experiment Station, 84-5, 446, 457,
 458, 492, 497, 611; statistics, 84
Fireweed, 149
 Fish, Mrs. Mary P., 370
 Fish, 11, 26, 82-6, 307, 427, 453, 470,
 482, 483, 486, 488, 493, 495, 496,
 497, 509, 510, 527, 602, 609; con-

Fish (Cont.)

- servation program, 83-6, 495; hatcheries, 22, 85, 421, 489, 495, 512, 514; statistics, 22, 67, 497; U. S. Bureau of Fisheries, 85, 453; varieties found in Michigan, 22; *see also* Fishing
 Fisher Brothers, 231
 Fisher, Prof. James, ix
 Fisher Body Corp., 297, 299-300, 302, 303, 336, 428, 640
 Fishermen, 203, 451, 455, 485, 488, 497, 502, 509, 596, 603, 609; commercial, 605, 612, 613; French, 360, 380, 382
 Fishing: xxvi, 67, 85-6, 484, 491, 502, 597, 607, 611, 612, 620; commercial, 8, 67, 83, 199, 200, 454, 455, 457, 472, 487, 489; festivals, 22, 485, 496, 509, 510; by Indians, 26, 307, 470; localities, 86, 105, 113, 431, 433, 447, 452, 453, 482, 483, 486, 492, 493, 494, 495, 496, 509, 510; rights, 634; season, 483; winter, 199, 453, 509, *illus.* 120 f.
 Fisk, Photius, 358
 Fitzgerald, Frank D., 642
 Fitzsimmons, Mrs. P. W. A., 391
 Flat River, 307, 442, 513
 Flat Rock, 219, 460-61, 657
 Fletcher, G. N., 485
 Fletcher, F. W., State Park, 485, 486
 Flight of the Shawnee (trail), 409-10
 Flint, 296-304, 655; American Negro Emancipation Day, xxxiii; architecture, 168; Atwood Stadium, 302; automobile industry, 68, 214, 217, 262, 297-300; history, early, 298; Industrial Mutual Assn., 302, 441; International Folk Festival, xxxv; manufacture of patented road carts, 8, 639; map, 301; National Negro History Week, xxiv; Puerto Rican Negro Emancipation Day, xxxiv; railroads and interurban lines, 57, 296; Robert Burns Club, 297; on Saginaw Trail, 56; stage coach line, 70, 238; Syrian festival, 297; vehicles, collection, 304, *illus.* 432 f.
 Flint River, 18, 296, 298, 303, 440, 441, 446
 Floods, 310, 366, 400
 Flora, 20-22; bibliography, 647
 Flower of the North, *The*, 147
 Flower Vase Rock, 574
 Flushing, 658
 'Flying Dutchmen,' 121
 Flynn, Alexander, 140
 F.O.B. Detroit, 150
 Folk schools, 448
 Folklore, 653
 Font Lake, 602, 607
 Foote Brothers, 639
 Ford, Edsel, 221, 464
 Ford, Emory L., 414
 Ford, Henry, 9, 79, 167, 211, 216-27 *passim*, 231, 240, 290, 291, 352, 388, 390, 391, 414, 468, 521, 564, 595, 596, 640, 642
 Ford, J. B., 471
 Ford, Richard, 290
 Ford, Royal Milton, 291
 Ford, William, 216, 225
 Ford: Airport, 211, 225, 228; educational system, 95, 220; engineering laboratory, 227; Foundation, 212; Hospital, 275; industries, 215, 216-20, 221, 294; sawmill, 596; ship plant, 215; Sunday Evening Hour (radio), 273; Symphony Orchestra, 153; Tom Cooper racing car, 217
 Ford Motor Co., 78, 79, 80, 211, 212, 213, 217-21 *passim*, 223, 240, 275, 286, 290, 461, 640; cars: first practical, 639; Model A, 218, 219; Model T, 218; V-8, 219; 'Hunger March' Riot, 641; plants: Dearborn, 221, 290, 294, 461; Highland Park, 172; River Rouge, 95, 220, 221, 224, 468, *illus.* 214 f.; Technological Institute, 95
 Ford of the Gray Robe, 409
 Ford Lake, 493
 Ford Republic, 413
 Ford River, 578
 Ford's Island, 521
 Fordson, 211, 215, 218
 Forest Hill, 499
 Forest Life, 145
 Forester, 457
 Forests, 20-21, 55, 82, 85, 351, 404, 447, 455, 509, 510, 595, 597, 607, 611; depleted, 5, 10, 48, 62, 87, 344, 419, 499, 508
 Forestry, 7, 62, 182, 497, 505, 563; *see also* Fires, Reforestation
 Forestville, 457
 Fort Dearborn-Detroit Highway, 397, 403
 Fort Michilimackinac State Park, 481
 Forts: Algonquin, 383, 536; Brady, 46, 373, 374, 376, 379; Custer, xxxiv, 197, 403; Dearborn, 492; de Buade, 35, 381, 383, 481, 629; Drummond, 553; George, 622; Gratiot, 70, 119, 360, 364, 637;

- Holmes, 620, 621, 622; Mackinac, 616, 620, 621, 622, 623, 624, 625, 633, 639; Malden, 473; Miami (Miami), 36, 206, 630; Michilimackinac, 39, 40, 481, 629, 630, 631, *illus.* 58 f.; Ponchartrain (Detroit), 36, 37, 463, 465, 466, 470, 473, 475, 630, *illus.* 58 f.; Repentigny, 374, 376; Saginaw, 366; St. Joseph, 36, 40, 41, 360, 630, 631; Sinclair, 450; Wayne (Army post), 144, 271; Wilkins, 583
- Foster, Con, 523
- Foundries and machine shops, 68, 207, 391, 427
- Fountain, 658
- 4-H Club, 445, 493, 504
- Fourier, François, 404
- Fowler, 658
- Fowlerville, 419, 658
- Fox (village), 578, Islands, 602; Lake, 608; River, 561
- Francis, Father, 580
- Franck, Henry Alverson, 148
- Frankenmuth, 105, 490, 658
- Frankenstein, Richard T., 79
- Frankfort, 530, 534, 658
- Franklin, Benjamin, 612
- Fraser, 658
- Fredenthal, David, 141, 144, 267
- Frederic, 495
- Frederick, John T., 148
- Frederick, 460
- Fredericks, Marshall, 250
- Free Church Park, 397
- Free Will Baptists, 394
- Freeland, 430
- Freeport, 658
- Freer, Charles Lang, 259
- Freesoil, 658
- Freighter, *illus.* 214 f.
- Fremont, 656
- French, 4, 24-5, 27, 28, 34-9, 59, 103-4, 112, 113, 200-201, 212, 213, 235, 237, 238, 283, 298, 344, 345, 351, 360, 361, 374, 380, 381, 387, 388, 413, 452-3, 461, 466, 469, 473, 477, 481, 603, 617, 631
- French and Indian War, 37, 235, 617, 631
- Frieske, Frederick Carl, 140
- Frost, Robert, 149, 151
- Fruit: apples, xxxvi, 7, 19, 25, 59, 60, 206, 401, 405, 406, 448, 596, 601; berries, 21, 26, 59, 60, 206, 487; cherries, xxxv, 7, 21, 60, 206, 406, 459, 639, *illus.* 526 ff.; grapes, 3, 21, 60, 178, 206, 207, 353, 401, 405, 406, 411, 414, 419, 455, 475, 477, 478, 482, 514, 515, 526, 528; orchards, xvii, 19, 206, 391, 406, 477, 503, *illus.* 526 f.; peaches, 7, 59, 448, 478, 529; tomatoes, 406; statistics, 59
- Fruit and Flower Festival, xxxvi
- Fruitport, 658
- Fugitive Slave Law, *see* Slavery
- Fur, 27, 39, 44, 56, 82, 238; statistics, 39; trade, 36, 39, 41, 45, 47, 48, 59, 89, 235, 298, 351, 360, 366, 374, 381, 413, 430, 469, 616, 617, 618-19, 625, 635; traders, 28, 103, 298, 366, 375, 379, 381, 616, 617
- Furniture industry, xxxiii, xxxv, 397, 440, 441, 442, 444, 447, 506, 638; Detroit, 239; Grand Rapids, 8, 67, 68, 106, 306, 310-11, 313, 314, 630, 638, *illus.* 244 f.
- Fussman, Frederick, 143
- Gaastra, 658
- Gabrilowitsch, Ossip, 153
- Gagetown, 658
- Gaines, 658
- Gales, Weston, 153
- Galesburg, 403-4, 658
- Galen, 412, 658; Farm Bureau Cooperative Exchange, 412
- Gallagher, Rev. Michael J., 91
- Gamble, Roy, 139, 140
- Game, 22-3, 82-5, 400, 475, 478, 485, 486, 493, 504, 510, 601; birds and fowl, 23, 82-3, 85, 400, 452, 453, 455, 475, 478, 487, 488, 493, 510; conservation, 82-6, 307, 400, 426, 427, 454, 487, 504; species, 22-3, 82-3; statistics, 23, 85; *see also* Hunting, Wild life
- Gangsters, 469
- Garden, 541, 658
- Garden City, 656
- Garden Island, 602, 606
- Gardeur, Louis de, Sieur de Repentigny, 374
- Garnet, 539
- Gas, natural, 66, 67, 361, 433, 446, 447, 470, 498, 512, 513
- Gay, George W., 310
- Gaylord, 493-4, 658
- General Foods Corporation, 195
- General Motors Corporation, 78-9, 81, 150, 154, 217, 219, 262-3, 272, 298, 300, 302, 337, 417, 428, 640, 642; Building, 233, 263; divisions, 263; technological institute, 95, 302-3; Truck and Coach Co., 428

674 INDEX

- Geneserath, Lake, 602, 607, 609
 Geography, 16-19
 Geology, 13-16, 344-5, 478, 499, 599, 646
 Georgian Bay, 34, 149
 Gera, Michael, 288
 Germans, 104-5, 110, 112, 152, 231, 245, 490
 Gessner, Robert, 149, 150
 Ghent Treaty, 633
 Ghione, Franco, 153
 Ghost-ship stories, 121
 Ghost towns, 200, 417, 439, 455-6, 460, 497, 533
 Gibault, Father, 40
 Gibbel, Joseph, 269
 Gibraltar Island, 46
 Gies, Joseph, 139
 Gilbert, Cass, 169, 249, 257
Gilbert Mollison (schooner), 128
 Gilfillan, Harriet, 150
 Gillet, Rev. Louis Florent, 281, 462
 Gillett, La Verne, 494; Collection, 494
 Gilman, Henry, 29
 Girard, 502
 Githens, Alfred M., 293
 Gladstone, xxxiii, 542-3, 578, 656
 Gladwin, Maj. Henry, 38, 631
 Gladwin, 432, 658; State Park, 432
 Glen Arbor, 533
 Glen Haven, 530, 533
 Glen Lake, 533, 534
 Glenn, xxxiv, 529
 Gliders, 533-4
 Gobles, 658
God Head, 149
 Goddeyne, Joseph C., 201
 Goetzville, 552
 Gogebic: County, 14; County Park, 548; district, 13, 164; Lake, 14, 567; Lake State Park, 548; Range, 547, 548, 638, 639
 Gold, 5, 63, 122, 565
 Goldspring Township, 510
 Gomborg, Prof. Moses, 183
 Good Harbor, 533
 Goodells, 439
 Goodhart, 517
 Goodhue, Bertram G., 436
 Gorge Falls, 550
 Gould City, 539
 Graham Paige Plant, 224
 Grand Blanc, 430, 658
 Grand Eight Hour League, 73
 Grand Haven, xxxv, 128, 140, 307, 413, 419, 422, 527, 528, 656; State Park, 358, 527
 Grand Island, 562, 570, 572; *illus.* 58 f.
 Grand Lake, 484, 485
 Grand Ledge, 419-20, 656; park, 342
 Grand Marais, 15, 561
 Grand Portal, 573
 Grand Rapids, 8, 67, 79, 140, 154, 157-9, 163, 169, 305-15, 639, 655; Amb-
 berg residence, 172; Apple Show and
 Horticultural Convention, xxxvi;
 architecture, 166, 172, 311, 312,
illus. 432 f.; canal route to Lake
 Michigan, 443; city management,
 54; Civic Auditorium, 311, 312;
 Cricket Club, 146; furniture indus-
 try, *see* Furniture; gypsum de-
 posits, 64; hydroelectric plant, 310,
 639; immigrants, 106, 107, 306,
 511-12; map, 308, 309; Martin
 Ryerson Library, 170; pioneers,
 419; Public Library, 143, 312; Pub-
 lic Market, 313-14, *illus.* 526 f.;
 Public Museum, 313; roads, early,
 57, 402; St. Cecilia Society, 152,
 305, 312; Winter Sports Carnival,
 xxxiii
 Grand River, 18, 61, 105, 240, 306, 307,
 310, 313, 329, 330, 336, 400, 419,
 420, 421, 422, 442, 443, 501, 503,
 504, 505; Trail, 28, 417; Valley, 25
 Grand Sable Falls, 561; Lake, 561
 Grand Traverse Bay, 515, 521, 531-2;
 region, 19, 56, 59, 88
 Grandport, *see* Ecorse
 Grandville, 443, 658
 Grange, the, 52, 73
 Grant, Capt. Alexander, 463-4; Grant's
 Castle, 464
 Grant, Ulysses S. (house), 279
 Grant, 658
 Grape Festival, xxxvi
 Grass Lake, 400, 658
 Grass River, 520
 Gratiot, Gen. Charles, 364
 Gravaeraet, Robert, 345, 347
 Graveure, Louis, 340
 Grawn, 515, 523
 Gray, Frank, 288
 Gray, Harold S., 391
 Gray, Hugh, ix
 Grayling, 491, 494-6, 658; Canoe Carni-
 val, xxxv, 495; National Guard
 encampment, xxxv; State Fish
 Hatchery, 495; Winter Carnival,
 xxxiii, 495; Winter Sports Park, 495
 Grayson, David, *see* Baker, Ray Stan-
 nard
 Greason, William, 140
 Great Flowing Well, 474

- Great Lakes and region, 4, 113, 120-21, 149, 449, 473, 610, 617, 625; area, 18; battles, 37, 463; bibliography, 653; chanteys and songs, 123; climate, 19, 20; commerce, 235; disasters, 122, 126 ff.; economy, 18; explorers, 56; Forest Experiment Station, 563; Indian trail, 387; international boundary, 41, 374; Iroquois resistance, 35; Jesuits, 89; legends, 121; literature, 302; lore, 113-34; navigation, 47, 55, 238, 251, 472; recreation, 86; shipyards, 201; shore lines, 17; transportation, 8, 56, 57, 199, 451; vessels, 267, 307, 464, 467; *see also individual lakes and Navigation*
- Great Lakes Engineering Works, 468
- Great Lakes Steel Corporation, 468
- Great Lakes Steel Plant, 470
- Great Sauk Trail, 213-14, 387, 392, 393, 396, 634
- Greeley, Horace, 584
- Green, 600
- Green Bay, 15, 26, 34, 381, 578
- Green Bush*, 148
- Green Stone Beach, 614
- Greenberg, Hank, 234
- Greenbush, 486
- Greenfield, 213
- Greenfield Village, 215, 221, 225, 226
- Greenmaun, Dr. E. S., 29
- Greensky Hill, 519
- Greenville, 443, 513, 656; treaty (1795), 632
- Greilickville, 531
- Grenat, Charles T. (farms), 477
- Greysolon, Daniel, 36
- Griffin, Judge John, 44
- Grifon* (sailing vessel), 36, 56, 121, 381, 450, 555, 617, 629, 630
- Grindstone City, 454, 456
- Griswold, Stanley, 44
- Gros Lap, 537, 538
- Groseilliers, Medart de, 374
- Grosse Ile, 109, 228, 295, 466-7, 472-5; airport, 228, 474, 641
- Grosse Pointe, 109, 460; Farms, Park, Shores, Woods, 463, 464, 465-6, 631, 655, 656, 658
- Guernsey, Samuel, 193
- Guernsey cows, *illus.* 526 f.
- Guest, Edgar A., 149
- Guild of Former Pipe Organ Pumpers, 409
- Gull Island, 602, 608
- Gulliver, 540
- Gun Lake, 514
- Gunnison, Captain, 314; Octagonal House, 314
- Gurvitch, Sophie, 288
- Gwinn, 172, 577; County Park, 577
- Haber, Dr. William, ix
- Hackett, David, 180
- Hackley, C. H., 142, 352, 356, 357; Memorial, 357, Park, 356; Public Library, 356
- Haggerty Field, 228
- Haigh, Henry A. and Richard, 227
- Haldimand, Sir Frederick, 616
- Haldimand Bay, 616; Harbor, 626
- Hale, 487
- Halevy Society, 154
- Hamilton, Lt. Gov. Henry, 38, 39, 40, 235, 631
- Hamilton Lakes, 545
- Hamlin Lake, 435
- Hammond, 483; Bay, Coast Guard Station, 483
- Hamtramck, Col. John Francis, 268, 283
- Hamtramck, 96, 107, 234, 282-9
- Hancock, 589-90, 591, 656
- Hanna, Mark, 545
- Hanna Furnace Plant, 468
- Hannah, Perry, 522
- Hannahville Indian Settlement, 544
- Hanover, 658
- Hanson State Military Reservation, 496
- Harbert, 407
- Harbor Beach, 454, 457
- Harbor Light, 606
- Harbor Springs, 517, 658
- Hardy Dam, 447
- Harlow, Amos R., 345
- Harmonie Singing Society, 152
- Harmsworth Trophy Race, 252
- Harper's Ferry Raid, 239
- Harrietta, 658
- Harris, M. B., 544
- Harris, 544
- Harrison, Bertram, 160
- Harrison, Gen. William Henry, 43, 46
- Harrison, 491, 497, 633, 658
- Harrisville, 486
- Harsen's Island, 452
- Hart, Alvin N., 440
- Hart, 526, 658
- Hartford, 406, 658
- Hartland, 143, 167, 490-91
- Hartwick Pines State Park, 495, *illus.* 620 f.
- Harvest Festival, 353
- Harvey, 564
- Haskell, John, 403

- Hastings, Rev. E. P., 427
 Hastings, 172, 402-3, 421, 656
 Haven, Erastus Otis, 182
 Hawk Island, 613
 Hayden, Robert E., 163
 Hayes, Walter J., State Park, 392
 Haywood, Alba, 509
 Hebard, Charles, 596
 Hebard Park, 585
 Hecker, Col. Frank G., 169
 Heisterman Island, 455
 Helmer, 559
 Hemans, Lawton T., 476
 Hemans, 476
 Hemingway, Ernest, 151
 Henderson, Robert, 162-3
 Hendrickson, George A., 294
 Hendryx, James B., 147
 Hennepin, Father, 35, 409, 473
 Henrich, Frederick W., 293
 Henry, Alexander, 582, 599, 621, 631
 Hermansville, 544
 Herring, Augustus Moore, 209-10
 Herring-Choker Jamboree, xxxiii, 373
 Hersey, 658
 Hesperia, 658
 Hessel, 554-5
 Hewitt, Rev. Frederick, 393
 Hiawatha, 540-41
Hiawatha, 27, 87, 145, 379, 556, 558, 561, 572, 573
 Hiawatha National Forest, 562; Monument, 563
 Hickory Corners, *illus.* 526 f.
 Higgins Lake Nursery, 85
 Higgins Lake State Park, 496
 High Island, 208, 602, 605, 608
 Highland Park, 170, 212, 215, 218, 220, 223, 234, 283, 284, 289-95, 468, 655; Festival, 291; Ford plant, 172; Woman's Club, 291
 Highways, xxii, 28, 47, 49, 56, 57-8, 88, 640; old stagecoach roads, 402, 403, *illus.* 120 f.
 Hildebrand, Gustave, 144, 266
 Hill, Arthur, 188
 Hillman, 485, 658
 Hillsdale, 94, 394, 408, 656; County, 394, 396
 Hine, Lt. C. G., 266
 Hinsdale, Dr. Wilbert B., ix, 29
 History, 34-54; bibliography, 648; chronology, 629 ff.
Hive, The, 148
 Hobson, Joseph, 362
 Hodenpyle, Anton G., 421; Woods, 421
 Hodge, S. F., & Co., 468
 Hoelt State Park, 483
 Hoerman, Carl, 143, 405
 Hog Island, 602, 609
 Hogan, James H., 436
 Holland, 94, 106, 128, 147, 316-20, 439, 441, 444, 477, 515, 527, 528, 655; Furnace Co., 318; State Park, 320, 528; Tulip Festival, xxxiv, *illus.* 432 f. and 526 f.
Hollander, De, 317
 Holly, 167, 490, 658
 Holmes, Maj. Andrew Hunter, 618, 622
 Holy Island, 520
 Homer, 408, 658
 Honey, 412, 476
 Honor, 658
Honor of the Big Snows, 147
 Honore, Paul, 140, 431
 Hood Museum, 499
 Hopkin, Robert, 138
 Hopkin Club, *see* Scarab Club
 Hopkins, 658
 Hopwood, James Avery, 151
 Horan, Kenneth O'Donnell, 149-50
 Hospitals, 96-8; American Legion, 403; Battle Creek Sanitarium, 194, 197; Eloise, 172, 388; Ionia State, 442; Mich. Children's, 414; Mich. State Hospital for Epileptics, 99; Newberry State, 172, 558; N. Mich. State Tuberculosis Sanatorium, 493; Pine Crest Sanitarium, 405; Pinecrest Sanatorium, 544; Pontiac State, 429; St. Vincent's, 97; Wm. H. Maybury Sanatorium, 416
 Houghton, Dr. Douglass, 344-5, 432, 478, 582, 591, 599, 636; monument, 587
 Houghton, 14, 94, 115, 129, 589, 590, 591, 592, 594, 639, 656; County, 5, 76-7, 592
 Houghton Lake, 56, 447, 496, 497; State Forest, 497; village, 339, 497
 House of David, 91, 205, 207, 208, 407, 527, 605, 640
 Housewives' League, 109
 Howard, Bronson, 158
 Howard, Jacob M., 505
 Howard, Col. Joshua, 227
 Howard, Lt. Com. O. W., 266
 Howard, Sidney Coe, 162
 Howard City, 444, 447, 513, 658
 Howell, 418, 656
 Hoyt, Jesse, 369; Library, 369
 Hubbard, Bela, 29, 245
 Hubbard Lake, 486
 Hubbardston, 658
 Hubbard, 589
 Hudson, 508, 658

Hudson Motor Car Plant, 79, 264
 Hudson's Bay Company, 611
 Hudsonville, 658
 Hulbert, 557; Lake, 557
 Hull, Helen Rose, 147
 Hull, Gen. William, 44, 45, 46, 237, 467, 633
 Hume, Sam, 162
 Humphrey, Elizabeth, 340
Hunger Fighters, 150
 Hunt, Frazier, 151, 318
 Hunt Creek, 86
 Hunter, John and Rufus, 426
 Hunter, W. F. (collection), 498
 Hunting, xxiv, 82-5, 453, 470, 493, 497, 510, 596, 612; hunters, 451, 475, 476, 488, 493; by Indians, 27, 307, 426, 427, 431, 454; licenses, 23, 83; private clubs, 485; season, 453, 470, 475, 481, 488; *see also* Game
 Huntington Woods, 425, 658
 Hurd, Gildersleeve, 137
 Hurlburt, Chauncy, 265
 Huron, Lake, 15, 16, 22, 25, 58, 61, 119-20, 121, 123, 125, 126, 129, 360, 366, 454-9 *passim*, 475, 480-88 *passim*, 618, 621, 624, 629, *illus.* 120 f. and 214 f.
 Huron Bay, 595, 596; Park, 596
 Huron City, 456-7; County, 65, 475, 476; Mountains, 17, 595, 597; National Forest, 487, *illus.* 620 f.; River, 178, 180, 388, 400, 417, 461, 466, 467, 597; State Park, 456
 Huron Portland Cement Co., 485
 Hussey, Erastus, 193
 Hussey, Dr Russell, ix
 Hutchins, Harry Burns, 183, 186
 Hutchinson, Shelly M., 390
 Huddy, Alfred, 140
 Hydroelectric development, 69-70, 513; municipal plants, 397, 408

I Found No Peace, 150
I Went to Pit College, 150
 Iargo Spring, 487
 Ice Mine, 614
 Idlewild (lake), 433
 'If I Should Die Tonight,' 146
 Illinois County, 40, 41
 Illinois and Michigan Canal, 307
 Illinois River, 630
Illinois (steamer), 128
 Imlay City, 439, 475, 477, 658
Independence (freighter), 572
Indian Drum, The, 147
 Indian Drum Cave, 574
 Indian Point, 607

Indian Reorganization Act, 33
 Indian River, 492
 Indian Village, 382
 Indians, 4, 24-33, 34-47 *passim*, 103, 145, 164, 165, 206, 235-6, 248, 283, 307, 344, 360, 371, 381, 390, 393, 396, 430, 434, 441, 442, 445, 447-8, 450, 453, 454, 461, 462, 472, 481, 486, 507, 529, 531, 541, 542, 544, 568, 600, 614, 619, 621, 631, 632; bibliography, 647; burial grounds and mounds, 29, 353, 387, 392, 404, 406, 443, 469, 477, 502, 503, 504, 511, 519, 593, 595, 602, 603, 607; relics, 29, 31, 302, 304, 313, 333, 362, 383, 412, 498, 499
 Tribes: Algonquin, 24, 26, 113, 353, 451, 477; Chippewa, 24, 25, 26, 27, 28, 31, 35, 249, 298, 346, 353, 366, 374, 382, 399, 431-2, 483, 487, 556, 571, 593, 601, 603, 605, 633-4; Eel River, 25; Five Nations, 25; Fox, 25, 265, 466, 503, 630; Huron, 25, 34, 35, 400, 463, 466, 473, 617, 630; Iroquois, 25, 35, 374, 465, 617; Mascoutin, 25; Menominee, 25; Miami, 25; Ojibway, 24, 113, 370, 513, 613, Osakina, 370; Ottawa, 25, 31, 38, 238, 249, 317, 370, 382, 400, 427, 443, 455, 457, 463, 466, 473, 487, 513, 519, 603, 605, 617, 630, 633, 634; Piankashaw, 25; Potawatomi, 25, 31, 213, 298, 317, 353, 387, 392, 397, 400, 402, 406, 408, 409, 410, 451, 457, 473, 474, 492, 502, 503, 513, 633, 634; Sac, 370; Sauk, 25, 408, 410, 431, 432, 465, 466, 503, 630; Shawnee, 39, 408, 467; Sioux, 25; Wea, 25; Wyandot, 25, 457, 467, 469, 470, 471, 473, 633
 Industrial Fellowship League, 302
 Industrial Mutual Association, 302
 Industrial Workers of the World (I.W.W.), 76
 Information service, xxix
 Ingham County, 503
 Inkster, 214, 387, 656
 Inland Lime and Stone Co., 539
 Inland Waterway, 482
Inmate, The, 349
 Interlochen, 523; National Music Camp, 154, *illus.* 432 f.; State Park, 523
 Intermediate Lakes, 520
 International boundary, 41, 373, 610, 612
 International Bridge, 378
 International Folk Festival, xxxv

- International Typographical Union, 71
 International Union of Ship Carpenters and Caulkers, 73
 Ionia, 442, 656; State Hospital, 442
 Iosco County, Lumberman's Memorial, *illus.* 58 f.
 Irish, 605
 Irish Hills, 387, 390, 391-2, 393
 Iron, 3, 5-6, 17, 50, 56, 62-4, 107, 114, 122-3, 344-5, 478, 608, 636, 638, 640, 646; furnace and works, 222, 382, 456, 468, 470; Great Lakes Steel Corp., 468, 470; open pit and shaft mining, 575, 576; ore docks, 344, 345, 347, 543; value (1925-9), 64, *illus.* 214 ff. and 620 ff.
 Iron County, 14
Iron Hunter, The, 147
Iron Man in Industry, The, 150
 Iron Mountain, 219, 537, 545, 546, 655; Railroad, 57, 345
 Iron Ore Bay, 608
 Iron Range, 344
 Iron River, 547, 656
 Ironton, 520
 Ironwood, 550, 655
 Isabella, 542
 Isabella Reservation, 32
 Ishpeming, xxxiii, 57, 63, 345, 564, 656
Islanders, 147
 Isle au Cochon, 248
 Isle du Castor, 603
 Isle la Marguerite, 248
 Isle Royale, 14, 19, 29, 121, 581, 583, 610-14, 636
 Israelite City of David, *see* House of David
 Ithaca, 491, 499-500, 658
 Ives, L. T. and Percy, 138

 Jackson, Andrew, 49, 146, 213, 391, 461
 Jackson, xxxv, 8, 70, 74, 108, 141, 193, 394, 399, 401, 408, 504-7, 655
 Jackson Mining Company, 63, 345, 636
 Jackson Tindale Mill, 517
 Jam Handy Studios, 277
 James, Col. Reginald, 473, 474
 Jay, John, 42, 236
 Jay Treaty, 618, 632
 Jean, Father Peter de, 517
 Jeddo, 75
 Jefferson, Thomas, 235
 Jenison, 443
 Jenney, Prof. William Lebaron, 184
 Jerry, Sylvester, 144
 Jesuits, 89, 103, 206, 409, 473, 481, 515, 516, 517
 Jewish history murals, 130

 Jews, 231
 John Ball Park, 314
 Johnny Appleseed, 206
 Johnson, John, 27
 Johnstone, John, 376, 379
 Joliet, Louis, 376, 629
 Jones, Ira, 314
 Jones, Corporal John B., 473
 Jones, 410
 Jonesville, 214, 394, 658
 Joques, Isaac, 35
 Jordan, O. and A., 167, 270
 Jordan Lake, 420
Journal of Negro History, 297
 Joy, Henry B., 9, 258, 277, 278
 Joy, James F., 258
 Judson, Ross W., 352
 Jugo-Slavs, 110
 Jungwirth, Leonard, 248, 293
 Junior Birdmen (race), 459
 Juniper Orchard, *illus.* 120 f.

 Kahn, Albert, 171, 184, 186, 187, 188, 190, 251, 263, 265, 270, 275, 278, 279, 332, 337, 464
 Kalamazoo, 7, 8, 54, 59, 67, 75, 94, 106, 111, 147, 154, 163, 172, 321-7, 399, 401-5 *passim*, 508, 513, 514, 655; map, 325; Museum, 142, 326; Pansy Festival, xxxiv; Public Library, 326
 Kalamazoo County, 106, 323, 403; *illus.* 526 ff.
 Kalamazoo River, 105, 192, 321-2, 393, 401, 404, 409, 479, 514
Kalevala, 145
 Kalkaska, xxxiv, 510, 658
 Kansas-Nebraska disorders, 50
 Karoul, Mohammed, 294
 Kawkawlin, 489; River, 489
 Kearsage, 588
 Kelland, Clarence Budington, 148, 420
 Kellogg, Dr. John H., 193, 194
 Kellogg, W. K., 194, 197, 404; Kellogg Bird Sanctuary, 197, 404, 504
 Kellogg Foundation, 98-9, 194, 402, 500
 Kensington (Kent), 417
 Kent City, 658; County, 91, 106
 Kenton, 567
 Kentucky, 46
 Kewadin, 521
 Keweenaw: Bay, 31, 35, 594, 595, 596, 629; County, 5, 63, 76, 103, 582, 613; Peninsula, 14, 17, 29, 63, 451, 581-2, 585, 586, 589, 636, 641, 642; Point, 122, 611, *illus.* 120 f.
 Keystone State (boat), 605

- Keyworth, Dr. Maurice R., 96, 285-6, 288, 289
 Kimberly, Charles, 446
 Kinde, 475, 658
 Kinderhook, 502
 King, Benjamin Franklin, Jr., 146, 207
 'King Ben,' *see* Purnell, Benjamin
 'King Strang,' *see* Strang, 'King' James
 King's Ranch, 440
 Kingsford, 546, 656
 Kingsford Slide, *illus.* 620 f.
 Kingsley, 658
 Kingston, 445, 658
 Kinross, 535
 Kipling, Rudyard, 536, 542
 Kipling, 542
 Kirchmayer, Johann, 261, 436
 Kirkland, Caroline, 145
 Kitchitikiipi, 541
 Kiwanis Clubs, 191
 Knapp, Sheriff Thomas S., 245
 Knights of Labor, 73-6
 Knights of Pythias, 585
 Know-Nothing Movement, 418, 637
 Knudsen, William S., 78, 643
 Kolla, John P., 318
 Kraemer, Joe, 139
 Kundig, Father Martin, 96, 97
 Kyne, Peter B., 559
- Labadie, Joseph, 74, 76
 Labor, 10, 52, 68-9, 70-81, 110, 115-16, 195, 219-20, 231, 233, 240-42, 285, 299-300, 310, 588, 641, 642
 Lac Vieux Desert, 32, 593; Trail, 548
 Ladies Library Association, 302
Lady Elgin (steamer), 119, 122, 128
 La Houton, Baron, 86, 473
 Laingsburg, 658
 Lake Angelus, 648
 Lake Ann, 658
 Lake Carriers' Association, 251
 Lake City, 511, 658
 Lake Erie, Battle of, 245
 Lake Gogebic State Park, 548
 Lake Linden, 589, 658
 Lake Mine, 595
 Lake Odessa, 420, 658; Bible Conference, 420
 Lake Orion, 429, 658
 Lakeside, 75, 407
 Lakeview, 658
 Lamont, 421-2
 Land, 7; first public sale, 47; misuse, 10; ownership, 105, 237, 452, 469, 634; price, 105, 238, 249; secured from Indians, 4, 26, 31, 46-7; speculation, 31, 49, 457
 Land and Labor League, 73
 Lang, Alois, 356; Anton, 140, 436
 Lano, David, 136
 L'Anse, 32, 595, 596, 656; Bay, 595
 Lansing, John, 330
 Lansing and East Lansing, xxxiii, 94, 144, 154, 163, 328-42, 512, 655, 656; automobile factories, 57, 68, 329; Farmers' Week, xxxiii; map, 334-5; Poles, 107; Post Office, 169; railroads, 51, 239; State capital, 50, 329, 636, 637, 638; State Police Headquarters, 338-9, *illus.* 58 f. and 432 ff.
Lansing State Journal, 331
 Lapeer, 440, 656; County, 440, 441, 477; State Home, 440
 Lardner, Ring, 150, 411
 LaRouche, Floyd W., 33
 La Salle, Sieur de, 56, 138, 205-6, 245, 258, 381, 450, 555, 617, 629, 630
 Lathers, Swift, 526
 Lathrop, 577
 Laughing Whitefish Falls, 563
 Laurentia, 13
 Laurie, Lee, 436
 Laurium, 589, 656
 Lawrence, E. George and Russell E., 294
 Lawrence, 406, 658
 Lawton, 405, 658
 League of American Wheelmen, 58
 Lee, Daniel S., 418
 Lee, James W., 10
 Leelanau County, 106, 521; Lake, 532; Peninsula, 530, 531
 Leer, 485
 Lehmann, Evangeline, 156
 Leila Arboretum, 197
 Leland, Henry M., 217, 272, 275; Wilfred C., 275
 Leland, 530, 532
 Leland & Faulconer Company, 216, 217, 272
 LeNain, Antoine, 256
 Lenawee County, 391, 507
 L'Enfant, Pierre Charles, 173, 233
 Lenox, 459
 Leonard, 512, 658
 Leonard Flo Flying School, 228
 Leonidas, 409
 Le Roy, 511-12, 658
 Le Rue, John, 533
 Les Cheneaux Islands, 379, 482, 554, 555, 622
 Leslie, 503, 504, 658
 Letherby Homestead, 597
 Letourno, Francis, 167, 269

- Levering, 516
 Lewis, H. C., 395
 Lewis, James Otto, 136
 Lewis, John L., 78, 79, 300
 Lewis, Sinclair, 150
 Lexington, 458, 658
Lexington (schooner), xxvii, 122
 Licenses, fishing, xxvii; hunting, xxv
Life Among the Mormons, 606
Life and Letters of Woodrow Wilson, 148
 Light House Point, 344, 595
 Lighthouses. Au Sable Point, 561; Bay City, 454; Belle Isle, 251; Benton Harbor, 209; Fort Gratiot, 364; Forty Mile, 483; Grand Traverse Bay, 532; Iron Ore Bay, 607, 608; Isle Royale, 610; Livingston Memorial, 251; Mackinaw City, 481; Old Mission, 522; Pointe aux Barques, 456; Port Hope, 457; Presque Isle, 483; Rock Harbor, 614; Sturgeon Point, 486; Windmill Pointe, 264
 Lignery, 481
 Lincoln, Abraham, 326, 637
 Lincoln Lake, 435; River, 435; Park, 461, 655, 658
 Lincoln and Lincoln-Zephyr Plant, 275
 Lindbergh, Charles A., 274; Evangeline, 274
 Linden, 658
 Lisbon, 658
 Liske, 483, 485
Listen, Moon, 149
 Litchfield, 658
 Literature, 145-51, 645-53
 Litoget, Mary, 225
 Little Bay de Noc, 544
 Little Bradford Lake, 495
 Little Lake (Forsyth), 577
 Little Round Lake, 520
 Little Traverse Bay, 56, 509, 517, 518, 519, 520
 Little Twin Lake, 510
 Littlefield, Josiah L., 433
 Littlefield Lake, 433
 Livestock, *see* Dairying, poultry, and livestock
 Livingstone, William, 251
 Lloyd, Gordon W., 168, 247, 475
 Lochmoor, 463, 464
 Lockeian Bill of Rights, 635
 Lockwood, Normand, 155
 Log schoolhouse, 476
 Long, Charles D., 247
 Long Lake, 484, 485, 487
 Longfellow, Henry W., 27, 87, 145, 379, 556, 558, 561, 572; *see also Hiawatha* and Schoolcraft, Henry Rowe
 Looking Glass River, 420
 Lookout Point, 586
 Loon Lake, 487
 Lorch, Prof. Emil, ix, 187
 Loretto, 544-5
 Louis, Joe, 109, 234
 Lovers' Leap, 573, 623
 Lovett, B. B., 225
 Low, Albert, 555
 Lowell, 132, 442, 443, 513, 658
 Lower Peninsula, 7, 14, 16-25 *passim*, 29, 31, 32, 44, 46, 57, 59, 61-2, 65, 69, 83, 166, 366, 380, 455, 467, 481
 Lower Saginaw, 199, 200
 Lucas, C. W., ix
 Luce County, Tahquamenon Falls, *illus.* 620 f.
 Ludington, James, 434
 Ludington, xxxvi, 35, 65, 121, 163, 383, 423, 433, 434, 435, 525, 629, 643, 656; State Park, 435, *illus.* 620 f.
 Lumber and timber, 8, 12, 55, 60-62, 310, 435, 441, 446, 447, 449, 483, 495, 596, 599, 600, 602, 609, 620, 633; agreement with Canada, 200; attracted railroads, 57, 382; Bay City, 198-200; Cheboygan, 482; commemorated, 335-6; corduroy and plank roads, 57, 60, 345, 439; decline, 49, 67, 200, 331, 367, 418, 421, 432, 434, 439, 440, 441-2, 446, 447, 449, 450, 453, 455, 456, 457, 458, 482, 487, 488-9, 494, 496, 497, 509-13 *passim*; land stripped, 11, 21, 55, 59, 419, 444, 484, 489, 492, 499; limited supply at Grosse Ile, 473; literature, 146, 147, 149, 432; log rollaways, 367, 432, 447; log stealing, 307; lumbering followed fur trade, 298; Lumberjacks' and River-drivers' Association, 446; Lumbermen's Memorial, 487; Muskegon, 352; operations, 87; output, 637, 639; population factor, 103; prosperity, 5; racial elements in industry, 105-7; reminders, 199; second-growth, 640; shipped by Great Lakes, 18, 114, 132, 199, 407; statistics, 60-62, 68, 638; surplus burned, 60, 499; timber 'lookers,' 366; towns, 198, 201, 307, 345, 351, 361, 365, 398, 434, 441, 450, 511; waterways, 480, 483; wild life, 48, 82

Lumberjack Festival, 432
Lumberman's Gazette, 201
 Lumbermen, 352, 434, 515, 601, 608;
 strikes, 75, 77, 80, 639, *illus.* 58 ff.
 and 620 ff.
 Luther, 658
 Lutherans, 92, 105
 Lydell, Dwight, 421
 Lyon, Lucius, 307
 Lyons, 658
 Lyster, William Nardissus, 391

 Macatawa, Lake, 316, 320
 Macfadden, Bernarr, 194
 MacHarg, William Briggs, 147
 Mack, Willard, 160
 Mack-Leone Stock Company, 159
 Mackinac, Straits of, 3, 16, 25, 34, 35,
 38, 40, 43, 56, 57, 119, 122, 134,
 380, 381, 382, 383, 480, 481, 483,
 515, 602, 616, 621, 629, *illus.*
 214 ff.
 Mackinac County, 16, 28, 47, 381, 605
 Mackinac Island, 19, 46, 87, 125, 164,
 165, 345, 380, 381, 382, 481, 482,
 615-26, 632, 633, 634, 639, 658,
illus. 120 f.; City, 620, 623, 624,
illus. 58 f.; State Park Commis-
 sion, 625
 Mackinaw, 24; City, 480, 481, 482, 515,
 516, 605, 617, 658; Road, 535
 Macomb, Alexander, 473, 474
 Macomb, David B., 473
 Macomb, William, 249, 473, 474
 Macon, 391
 Madison, James, 473
 Magnier, Philippe, 253
 Magnus State Park, 519
 Maguaga, 466
 Makielski, Bronislaw, 144; Leon, 140,
 144
 Malcomson, Alexander Y., 217
 Malcomson and Higginbotham, 260, 281
 Malloch, Douglas, 149
Man from Red Keg, The, 432
 Mancelona, 509, 658
 Manchester, 658
 Mandan, 14, 584
 Mandoka (Indian chief), 409
 Manistee, 65, 140, 159, 524-5, 656; Fes-
 tival, xxxv; Lake, 510, 525; Na-
 tional Forest, 433, 435, 445, 525;
 River, 61, 510, 524
 Manistique, 532, 540, 656; Lake, 559;
 River, 540
 Manitou Beach, 508; County, 602;
 Islands, 531, 602
 Mann, Horace, 93

Mansart, François, 168
 Manton, 511, 658
 Manufacturing industries, 51, 67-70,
 103-10 *passim*, 306; chemicals, 66,
 430, 431, 467, 471; disinfectants,
 471; drugs and pharmaceuticals,
 9, 67, 68, 168, 169, 239, 268-69, 323,
 430-31, 467, 471, 479, 514; dyes,
 471; electrical equipment, 396, 506;
 enamel wear, 467; engines, 67; en-
 gines, marine, 67, 395, 468; farm
 implements, 500; fertilizer and soil
 dressings, 64, 469; fiber board, 462;
 fish net anchors, 455; flour, 394,
 395, 422, 427, 433, 441, 442, 479,
 485, 488, 508; food paste, 457;
 furnaces, 395; glass, 462, 467, 471;
 gristmills, 390, 404, 418, 441, 505;
 harness making, 508; harvesting
 machinery, 193, 403; hosiery, 207;
 houses, ready-cut, 201, portable,
 500; knitted wear, 201; leather
 (tanning), 458, 485, 510, 513;
 leather, sole, 509; machine shops,
 207; machinery and machine tools,
 67, 201, 468, 506; magnesium
 metal, 201, 431; metal products,
 193, 396, 443, 511; mint distillery,
 446; soy bean oil, 390; packing
 boxes, 462; paint and varnish, 67,
 239, 462, 467; paint driers, 471;
 paper, 8, 67, 68, 323, 326, 462, 467,
 482, 514, 525, 562, 600; parchment
 paper, 405; peat products, 16, 439;
 plaster, 64, 443, 469, 488; pottery,
 65, 266, 442; printing presses, 193;
 pulp, 485, 525; pumps, 508; rail-
 way cars, 239; refrigerators, 67;
 rolling mills, 462, 470; sal soda,
 471; screw factory, 447; shingles,
 490; shoes and gloves, 239, 395,
 513, 638, silk, spool, 67, 443; soap,
 467, 471; soda ash, 467, 471; soda
 bicarbonate, 467, 471; statistics,
 67-9; stoves and furnaces, 323, 638;
 trailers, 432, 469; woodenware, 8,
 68, 408, 478, 482, 509, 511, 562;
 woolens, 391, 427, 433, 439, 501
 Maple, 8, 26, 59, 500, 543
 Maple Rapids, 658
 Maple River, *illus.* 620 f.
 Marantette, Patrice, 409
 Marble Lake, 395
 Marcellus, 658
 Margrethe, Lake, 496
 Marine City, 128, 448, 450-51, 656
 Marine Library, 378; Post Office, 378
 Marine lore, 113-34

- Mariners' Institute, 242-3
 Marion, 658
 Marion Island, 521
 Marlette, 476, 658
 Marne (Berlin), 421
 Marquette, Father Jacques, xxxvi, 35, 138, 205, 245, 344, 348, 374, 376, 381-3, 434, 516, 571, 617, 623, 629
 Marquette, 13, 17, 57, 63, 64, 72, 94, 115, 159, 343-9, 556, 655, *illus.* 214 f.; County, 14, 17; Historical Society, 347; Island, 554; National Forest, 379, 536, 557; Range, 345, 564, 640; State Park, 564
 Marr, Walter, 262
 Marryat, Capt. Frederick, 87
 Marsh, Charles, 168
 Marshall, 93, 108, 166, 401-2, 502, 656
 Marshes and swamps, 3, 16, 34, 47, 238, 400, 483, 485; used for agriculture, 106, 419, 445, 446, 454, 514; flora, 22; game in, 82, 400, 454, 475; roads, 57, 425
 Marston, T. F., ix
 Martin, Homer, 78-80
 Martin Ryerson Library, 170
 Martineau, Harriet, 392
 Marx, Mayor Oscar B., 240
 Marysville, 448, 449-50, 658
 Mason, George D., 274, & Company, 167, 261, 275
 Mason, Gov. Stevens Thompson, 48, 187, 246, 635
 Mason, 503-4, 656; Hogback, 503; State Game Farm, 504
 Mason and Rice, 169
 Mason Center, 434
 Masonic Temple, 153, 272, 274
 Masonville, 542
 Mass, 592
 Massachusetts, 41, 220
 Mast, Gerald, 144, 433
 Matter, Elias, 310
 Maul & Lentz, 172
 Maxwell, Jonathan, 291
 Maxwell (-Chalmers) Motor Corporation, 291
 May residence, 172
 Maybee, 658
 Maybury, William C., 247, 258
 Maybury, William H., 416
 Mayville, 658
 McAllister, James, 391
 McBain, 658
 McBride, 658
 McCall, Duncan J., 326
 McCauley's Bay, 609
 McCoy, Rev. Isaac, 411
 McCreery, Maj. Fenton R., 304
 M'Curdy Park, 441
 McDougall, Lt. George, 249
 McDuffee, Alice, 324
 McEwan, Katherine, 436
 McFarland, 577
 McGraft, Newcomb, 352
 McGregor, Mrs. Tracy W., 293; Library, 170, 293
 McGuffey, William H., 226
 McGuire, 'Protestant Bob,' 560
 M'Keen, Lake, 440
 McKinley, William, 247, 560; Monument, 357
 McLain, Frederick J., State Park, 591
 McLaughlin Dunes Park, 435
 McManus, Mr. and Mrs. Theodore F., 426
 M'Math-Hulbert Observatory, 190, 429
 McMillan, 559
 McPherson brothers, 418
 Mears, Charles, 526; *Newz*, 526
 Mechanics' Mutual Protection, 71
 Mecosta, 658; County, 106, 512
 Medora, Lake, 584
 Meigs, Lt. M. C., 271
 Melchers, Gari, 139, 256, 258
 Melchers, Julius, 138
 Melstrand, 562
 Melvin, 658
 Melvindale, 461, 656
 Memorial Day Parade, xxxiv
Memorials of Half a Century, 29
 Memphis, 658
Men Against Death, 150
 Menagerie Island, 610
 Mendon, 409, 658
 Menlo Park, 226
 Mennonites, 91, 477, 517-18, 526
 Menominee, xxxv, xxxiv, 13, 64, 579-80, 638, 655; County Park, 544, 579; Range, 595, *illus.* 120 f.
 Meredith, site of, 497
 Merrill, Thomas W., 324
 Merrill, 446, 658
 Merz, Charles, 231
 Mesabi Range, 77, 451
 Mesick, 658
 Mesnard, Father René, 35, 629
Messiah, *The*, xxxvi, 306
 Metamora, 658
 Methodists, 92, 518, 519, 566, 633
 Miceless House, *The*, 490
 Michekewis Park, 485
 Michigamme, 566; Lake, 566; River, 566
Michigan (revenue cutter), 605
 Michigan Agricultural Station, 563

- Michigan Basin, 13, 14, 15, 16
Michigan Daily, 179
Michigan Essay and Impartial Observer, 633
Michigan, Lake, 3, 4, 8, 9, 15, 16, 17, 19, 22, 26, 34, 43, 49, 59, 61, 87, 105, 119, 120, 121, 122, 126, 128, 134, 205, 206, 209, 306, 310, 316, 321, 351, 352, 353, 357, 405, 407, 408, 419, 421, 422, 434, 435, 441, 447, 461, 475, 479, 481, 501, 515, 516, 517, 519, 520, 602, 608, 616, 629, 643, *illus.* 120 ff.
Michigan Mine, 597
Michigan Peninsula, 13, 36
Michigan Southern Railroad, 635
Michigan State. bibliography, 645-9; coast line, 18; Constitution, 48, 52, 53, 93, 640; Council of Churches and Christian Education, 92; Council of Religious Education, 491; Department of Conservation, 22, 33, 53, 70, 83, 84, 86, 432, 452, 493, 612; Fair, xxxvi, 279; Federation of Labor, 75; Fish Commission, 495; Flower and Garden Exhibition, xxxiv; Forest Fire Experiment Station, 497; Government, 34 ff.; Highway Department, 58, 70; Historical Society, 333; Holiness Association Camp Ground, 501; Home and Training School, 498; Hospital Commission, 499, M. and Huron Institute, 324, 326; Labor Mediation Board, 80; Land-Economic Survey, 53; map (state), back pocket, (tour) front end paper; Masonic Home, 499; Municipal League, 181; *Michigan Municipal Review*, 181; National Guard, 496; poetry, 145; Police, 149, 338, 339; Prison, 504, 505; Reformatory, 442; School for the Blind, 337; School for the Deaf, 304; Tool Show, xxxiii; Trunk Line Highway Association, 58
Michigan Territory, 46, 48, 92, 236, 457, 461, 473, 632
Michilimackinac, 35, 36, 39, 40, 42, 46, 86, 87, 374, 381, 450, 480, 481, 617, 632, *illus.* 58 f.
Microbe Hunters, 150
Middle Village, 517
Middleville, 658
Midland, 65, 201, 430, 655; County, 66; Court House, 431, *illus.* 244 f.
Midland, The, 148
Midland Chemical Company, 431
Milan, 491, 659
Milford, 416, 659
Mill Creek, 439
Millecoquin, Lake, 539
Miller, Bina West, 362, 639
Miller, Helen Topping, 150
Miller, Iris, 141
Miller, Col. James, 472
Miller, James M., 633
Miller, John, 362
Miller, John F., 424
Miller, Max, 150
Miller, Webb, 150
Millersburg, 659
Milles, Carl, 143, 172, 270, 437
Millikan, Dr. Robert A., 225
Millington, 659
Mills, Thomas, 540
Millsbaugh, Dr. Arthur, 404
Milton, 193
Minden City, 659
Mineral Hills, 659
Mineral baths, 446; springs, 420, 422, 446, 460, 501; waters, 16, 66, 205, 420, 422, 446, 501
Minerals, 16-18, 49, 62, 375; dolomite, 455, 467; gypsum, 15, 16, 62, 64-5, 488; lime, 467; limestone, 14, 15, 16, 17, 62, 65, 467, 472, 483, 485, 489; magnesium, 467, 471; marble, 14; marl, 16, 62, 395, 433, 490, 495, 496, quartzite, 14; sand, siliceous, 462, 467; sandstone, 8, 15, 17, 65, 346, 369, 419, 461, 462, 467; shales, 14, 15, 16; silica, 467; silver, 63; slate, 14, 65; statistics, 64-6; *see also* Copper, Gold, Quarries, *etc*
Minerat-Al-Hada, 213
Miner's Castle, 572; Falls, 563, 572
Mining and extracting, 7, 10, 11-12, 55, 57, 62-7, 103, 106, 177, 336, 345, 505, 597, 599, 600, 613, 614, 631, 637, 638; literature, 149; miners, 105, 106, 107; *see also* Coal, Minerals, *etc*
Minnesota mine, 63
Minong Mine, 613
Misery Bay, 485-6
Miss America (speedboats), 450, 451, 641
Missaukee County, 17; Lake, 511
Missionaries, 35, 36, 55, 86, 89, 345, 374, 381, 382, 434, 466, 473, 595, 598, 603, 617
Mississippi River, 8, 31, 35, 41, 446
Mitchell Trophy Air Race, 459

684 INDEX

- Mohammedanism, 91, 212, 294
 Mohawk, 587
 Mona Lake, 527
 Monguagon (or Maguaga), 466, 467
 Monroe, James, 461
 Monroe, 17, 47, 80, 103, 166, 281, 394,
 454, 460, 461, 462, 463, 467, 655;
 marshes, 16, 34; turnpike, 392
 Montague, 526, 659
Montcalm (barge), 129
 Monteith, Rev. John, 45, 93, 182
 Montgomery, Mrs. Leila Post, 197
 Montgomery, 659
Monticello (barge), 129
Montmorency (barge), 129
Montpelier (barge), 129
 Montrose, 659
 Monument Rock, 610, 613
 Moore, Edwin, 446
 Moore, Hiram, 403
 Moore, Julia, 145
 Moose, 612, 614
 Morenci, 659
 Morgan, J. P., 263
 Morgan, Lewis H., 565
 Morley, 513, 659
 Mormons, 91, 120, 516, 519, 520, 532,
 553, 602-7 *passim*, 637; *see also*
 Beaver Island
 Morotske, Mrs. Gust, 455
 Morrice, 659
 Morton Salt Works, 449
 Moscow, 393
 Mosquito Harbor, 573; River, 573
 Motor Vehicle Laws, xxii
 Mottville, 398-9, 515
 Mounds, *see under* Indians
 Mount Clemens, 40, 66, 70, 453, 460,
 479, 655
 Mount Franklin, 610, 613
 Mount Lookout-Louise, 610, 613
 Mount Mesnard, 348
 Mount Morris, 490, 659
 Mount Ojibway, 613
 Mount Pleasant, 32, 66, 94, 498-9,
 656; Indian School, 498
 Mount Porcupine, 601
 Moyer, Charles W., 76, 77
 Mrak, Bishop Ignatius, 348
 Mud Lake, 565
 Mueller, Gustava, 265
 Muir, Captain, 472
 Muir, 659
 Mulder, Arnold, 147, 148, 323-4
 Mullet Lake, 492
 Mullett Lake, 483, 492
 Mulliken, 659
 Munising, 15, 80, 556, 562, 570, 656;
 Bay, 562, 571; Falls, 562; River,
 562, *illus.* 620 f.
 Murphy, Frank, 79, 240, 299, 300, 428,
 457, 642, 643
 Music, 110, 152-6, 250, 643; Bach
 Music Festival, xxxiv, 389, 641;
 Detroit Symphony, 160, 273, 274;
 Grand Rapids Symphony, 311;
 Choral Society, 306; Interlochen
 Music Camp, 154, 523; Kalamazoo
 Symphony, 154, 323; Lansing
 Symphony, 154, 332, 337; May
 Music Festival, xxxiv, 155, 163, 177,
 179, 188; West Shore Music Festi-
 val, xxxiv
 Muskegon, 61, 74, 75, 142, 163, 350-58,
 444, 445, 448, 512, 515, 523, 527,
 655; County, 100; Heights, 351,
 353, 655; Lake, 351, 357; map,
 354-5; River, 11, 61, 87, 351, 352,
 447, 497, 512; State Park, 358,
 527; Valley, 504
 Musket Range, 621
 Muskingum River, 40
 Muttonville, 459
 Myers, Elijah E., 333

 N R A code, 220
 Nahma, 542; Indian Settlement, 542
 Nankin Township, 97
 Nash, C. W., 9, 298
 Nash, Willard, 139
 Nashville, 659
 National Defense Council, 643
 National Eight Hour League, 73
 National Farm Chemurgic Council, 219
 National Forest Festival, xxxv
 National High School Orchestra Camp,
 523
 National Labor Union, 73
 National Mine, 565
 National Park Service, 613
 National Theater, 157
 National Union for Social Justice, 91
 National Youth Administration, 319
 Natsos, Christopher, 389
 Natural History Museum, 142, 326
 Naubinway, 539
 Naval Armory, 144, 171, 266
 Navarre, Robert, 37
 Navigation on Great Lakes, 47, 56-7,
 113-34, 242-3, 251, 472, 532, 538;
 at Mackinac Straits, 380, 481;
 pleasure craft, 249, 252, 343, 579,
 615, 616; Port Huron, 359; at
 Sault Ste. Marie, 372, 374, 375, 378
 Neebish Island, 379, 551

- Negaunee, 63, 345, 556, 564, 575-6, 636, 638, 656
- Negroes, 10, 50, 55, 93, 108-10, 154, 193, 195, 205, 231, 234, 239, 240, 273, 283, 285, 291, 297, 306, 351, 360, 366, 387-8, 410-11, 433, 505; anti-Negro riots, 239; business and professions, 109; Islam cult, 91; statistics, 55, 108, 109, 641; suffrage, 51; troops, 637; work song, 129
- Nelson, James and Ezra, 310
- Nepessing Lake, 440
- Netherlands, the, 105, 316, 317, 443; Museum, 319; Pioneer and Historical Foundation, 319
- New Baltimore, 448, 453, 659
- New Brunswick* (schooner), 122
- New Buffalo, 399, 407, 408, 412, 659
- New Center Group, 261-4, 265
- New England, 47, 90, 104, 240, 443, 477-8, 503
- New Gnadenhutten, 460
- New Greenleaf, 476
- New Haven, 659
- New Home, A*, 145
- New Hudson, 416
- New Port, 128
- New Scenic Shore Road, 456
- New York, 41, 47, 87, 90, 103, 104, 180, 206, 239, 240, 443, 503
- Newaygo, 447-8, 659
- Newberry, Truman H., 277-8
- Newberry, 558-9, 656; State Hospital, 172, 558
- Newburgh, 445
- Newburyport, 206
- Newton, Stanley D, ix
- Niagara, 15, 38, 120, 473
- Niagara* (tug), 129
- Nicholas, Father Louis, 35
- Nicholas Aboretum, 191
- Nicolet, Jean, 34, 351, 374, 376, 381, 612, 617; monument and watch-tower, 621
- Niehaus, Charles, 356, 357
- Niles, 36, 40, 166, 168, 214, 387, 399, 408, 411, 515, 530, 655
- Nomad, 609
- Norrie, J. L., 550
- North Adams, 659
- North Bradley, 432, 497
- North Branch, 659
- North Fox Island, 608
- North Leslie, 504
- North Manitou Island, 128, 532
- North Military Hill, 593
- North Muskegon, 351, 659
- Northeastern Michigan Development Bureau, 87
- Northern Baptists, 92, 587
- Northern Islander*, 604
- Northport, 530, 531-2, 659; State Park, 532
- Northville, 99, 219, 415, 656
- Northwest Passage, 34, 373-4
- Northwest Passage*, 618
- Norway, 106, 511
- Norway, Mich., 545, 656
- Nottawa, 397-8, 410
- Nottawaseepe (Indian chief), 397
- Nottawaseepe Prairie, 409; Reservation, 396; River, 409, 429
- Novi, 415
- Nurseries and flower culture, 407, 462; chrysanthemums, 507; dahlias, 453; gladiolus, 407, 453; roses, 460; tulips, 317
- Oak Hill, 525
- Oak Openings*, 145, 392, 514, 528
- Oak Park, 659
- Oak Ridge Park, 551
- Oakland County, 17, 415, 424, 427, 428
- Oakland Motor Car Company, 262, 299, 428
- Oakley, 442, 659
- Oberammergau, 140, 356, 436
- O'Brien, Judge, 76-7
- Occueoc Lake, 483; River, 18, 483
- Oden, 518
- O'Donnell, 'Stub Foot,' 560
- Ogemakegate (Indian chief), 203
- Ogemaw County, 17; State Forest, 496
- Oh, Promise Me*, 150
- Ohio, 11, 30, 35, 37, 42, 44, 93, 207, 397, 491, 632; boundary claims, 48, 635; River, 206, 238
- Oil, 16, 66, 67, 86, 353, 361, 367, 433, 446, 447, 451, 470, 474, 489, 490, 496, 498, 499, 513, 635, 642
- Okemos, 330
- Old Baldy (sand dune), 320, 528
- Old Dearborn, 212, 215
- Old Haven*, 149
- Old Mission, 521, 531; Peninsula, 521; Point, 522
- Old Shore Trail, 56
- Olds, Ransom E., 9, 231, 331, 336, 337, 341, 474, 639
- Olds Tower, 329, 336
- Oldsmobile Company, 299, 337, 639
- Oliver Cromwell* (barge), 132
- Olivet, 94, 151, 402, 501-2, 642, 659
- Olympia Stadium, 274-5
- Omena, 531

- Omer, 488, 659
On New Shores, 484
 Onaway, 483, 657; State Park, 483
Once a Wilderness, 150
 Onekama, 534, 659
 Onsted, 659
 Ontario, 15, 113, 451; Lake, 113
 Ontonagon, 14, 32, 76, 597, 598-600;
 River, 567, 598, 600; Trout Rear-
 ing Station, 548
 Orchard Lake, 659
 Ordinance of 1787, 236-7, 632
Oriole (schooner), 128
 Ortonville, 659
 Osborn, Chase S., 147, 376
 Osborn, Paul, 163, 323
 Osceola, 589; County, 106; Mine, 589
 Oscoda, 75, 487
 Oshtemo, 405
 Ossineke, 486
 Otisville, 659
 Otsego, 514, 656
 Otsego Lake, 494; State Park, 494;
 Village, 494
 Ottawa County, 91, 421, 443
 Ottawa National Forest, 547, 564, 567
 Ottawa Trout Ponds, 518
 Otter Lake, 659
 Otto gas engine, 216, 218
Over the Hills to the Poorhouse, 146
 Ovid, 659
 Owendale, 659
 Owosso, 109, 140, 439, 441-2, 655
 Ox Bow, 431
 Oxford, 659

 Packard, J. W. and W. D., 277
 Packard Motor Car Company, 233,
 277-8, 450, 479, 640
 Pagetown, 606-7
 Painesdale, 592
 Paint River, 546, 547
 Palmer, Lizzie Merrill, 95, 259
 Palmer, Thomas, 450
 Palmer, Sen. Thomas W., 95, 259, 280,
 290
 Palmer, 576
 Pancake Festival, xxxi, xxxiv
 Panics: (1837), 71, 93, 97; (1873), 73,
 470, 638; (1893), 442
 Pansy Festival, xxxiv
 Pappas, John, 139
 Paquin, C. A., ix
 Paradise Valley, 109, 234
 Paraleon Beach, *illus.* 120 f.
 Parchment, 405, 659
 Paris, W. F., 257
 Paris, Peace of, 235
 Paris State Fish Hatchery, 512
 Parish, John, 512
 Parke, Hervey C., 268
 Parke-Davis Laboratories, 268-9; bio-
 logical farm, 479
 Parkman, Francis, 24
 Parkside Housing Project, *illus.* 432 f.
 Parliament of Upper Canada, 632
 Parma, 401, 659
 Parshall family, 442
 Passage Island, 610
 Pasteur Institute, 183
 Patton, Fred, 340
 Paulding, 593
 Paulus, Francis P., 139, 293
 Paw Paw, xxxvi, 143, 339, 405, 659;
 Lake, 406; River, 405, 406; Snow
 house, 165
 Peach Festival, xxxvi
 Pearl Beach, 452
 Peck, 659
 Peckham, Howard, ix
 Pekin, 213
 Pellston, 517, 659
 Pennsylvania Salt Plant, 471
 Pentoga Park, 547
 Pentwater, 526, 659; River, 526
 Pepsin, discovery of, 625
 Pequaming, 595, 596
 Perch Festival, xxxiv
 Pere Marquette Lake, 434; Park, 349,
 357, 434, 620, 623, 625, River, 434,
 435
Pere Marquette (ferryboat), 121
 Perkins, Frances, 300
 Perkins, 577
 Perrault, Marie, 141
 Perrinton, 659
 Perrot, Baron, 608
 Perry, Commodore Oliver Hazard, 46,
 245, 633
 Perry, 659
Persia (schooner), 126
Peshtigo (barge), 624
 Peshtigo Beach, 624
 Pet Milk Company, 513
 Petersburg, 659
 Petit, Anselm, 360
 Petoskey, xxxiii, 65, 159, 508-9, 515,
 517, 518-19, 656
 Petroleum, 8, 66-7, 86, 367, 431, 432-3,
 446, 490, 496, 498
 Pettibone Creek, 417
Pewabic (steamer), 123
 Pewabic Pottery, 141, 257, 261, 266
 Pewamo, 659
 Pfeffer, Father Joseph, 392

- Phelps, Neil, 194
 Phelps, William Lyon, 151, 456
 Phoenix, 219, 586
 Piccard, Dr. Jean, 225
 Pichel, Irving, 162
 Pickford, 552
 Picnic Rocks, 344
 Pictured Rocks, 15, 128, 561, 562, 570-75; State Park, 563, 572
 Pierce, Rev. John D., 93, 389, 402, 635
 Pierson, 513, 659
 Pigeon, 659
 Pigeon Hill, 357
 Pigeon Lake, 528
 Pigeon River, 456; State Forest, 493
 Pigeons, passenger, 526
 Pigs, feeding, *illus.* 526 f.
 Pinckney, 659
 Pinconning, 488, 659; River, 488
 Pine, 5, 7, 20, 61, 84, 85, 310, 380, 430, 439, 446, 449, 455, 484, 487, 492, 495, 496, 499, 508, 510, 596
 Pine River, 446, 449, 450; Battle of, 519-20, 604
 Pingree, Gov. Hazen S., 52, 235, 240-41, 247, 258, 418, 639
 Pioneers, 9, 31, 42, 152, 206, 235, 396, 398, 417, 467, 469, 478, 494, 500, 503, 505; relics, 333, 411, 412, 445, 479
 Pioneer Trails County Park, 543
 Piper, Walter C., 480
Plain Talk, 149
 Plainwell, 514, 659
 Plank roads, 345, 402, 423
 Platt, Charles A., 465
 Platte River, 534
 Players' Club, 161
 Pleasant Ridge, 424, 656
 Plymouth, 219, 399, 656
 Poe Lock, 375, 378
 Poetker, Rev. Albert H., 281
 Poets, 149
 Point Abbaye, 596
 Point Au Gres, 488
 Point Lookout, 622
 Point Pelee, 122
 Point St. Ignace, 380
 Pointe Aux Barques, 456
 Pointe Aux Chènes, 537
 Pointe La Barbe, 537
 Pokagon, Chief Simon, 145, 406
 Poles, 283, 284, 350, 351
 Police Field Day, xxxv
 Pond, I. K. and A. B., 184, 188
 Pontiac (Indian chief), 38, 40, 206, 235, 427, 428, 467, 473, 481, 631
 Pontiac, 47, 56, 57, 68, 79, 108, 173, 190, 239, 298, 423, 426, 427-9, 461, 479, 655; State Hospital, 429
 Pontiac Spring Wagon Works, 428
 Population, 48, 55, 103, 215; (1810), 633; (1820), 634; (1830), 634; (1850), 637; (1860), 637; (1870), 638; (1880), 638; (1890), 639; (1900), 640; (1920), 641; (1930), 641; (1940), 643
 Porcupine Mountains, 11, 14, 17, 597, 599-601, 631
 Port Austin, 454, 456, 475, 659
 Port Hope, 454, 457, 659
 Port Huron, xxxv, 36, 58, 65, 74, 76, 110, 119, 125, 128, 132, 239, 359-64, 439, 454, 455, 459, 642, 639, 655; map, 363
 Port Inland, 539
 Port Sanilac, 444, 454, 458, 659
 Port Sheldon, 313, 320, 528
 Portage, 606
 Portage Creek, 321, 405
 Portage Lake, 589; Ship Canal, 591
 Portage River, 408, 503, 596
 Potagannissing Bay, 553
 Porter, Gov. George B., 397, 635
 Porter, Capt. Moses, 43, 213, 236
 Portland, 413, 420, 659
 Ports of Entry, xxiii, 474, 520
 Portsmouth, 199
 Posen, 107, 484, 659
 Post, C. W., 193, 194, 195, 197
 Postum, 194
 Potato River, 488
 Potter, Edward C., 336, 462
 Potter, James W., 338
 Potter, William W., 643
 Potter Lake, 304, 441
 Potter Park, 338
 Pottersville, 500, 659
 Poultry, *see* Dairying, poultry, and livestock
 Pound, Arthur, 150
 Poure, Don Eugene, 41, 631
 Poverty Island, 122
 Powers, 544, 659
 Presbyterians, 92, 566
 Preshabestown (Peshabatown), 531
 Presque Isle, 348, 466, 485; County, 18; Harbor, 483-4; Lighthouse, 484, *illus.* 214 f.; Park, 346; Point, 344, 347
 Press, Michael, 340
 Princeton, 577
 Proctor, 633
 Pro-Musica, 154
 Prohibition, 51, 469

688 INDEX

- Prospect Hill, 393, 400
 Protar, Fedor, 607, 608
 Prudden, William K., 333
 Prudenville, 432, 497
 Puerto Rican Negro Emancipation Day, xxxiv
 Pure Oil Company, 431
 Purnell, Benjamin (King Ben) and Mary (Queen Mary), 91, 207, 208, 605, 640
 Put-in-Bay, 229
 Pyramid Point, 533
- Quakers, 108, 401, 410, 411, 414
 Quanicassee, 454
 Quarries, 8, 30-31, 65, 455, 456, 472, 483, 485, 488, *illus.* 620 f.
 Quebec, 38, 42, 164
 Quebec Act, 39, 631
 Quedoc (vessel), 121
 Queen Mary (liner), 543
 'Queen of the Woods,' 145
 Quest, 147
 Quincy, 387, 394-5, 659; Copper Mine, 590
 Quincy Herald, 395
 Quinnesec, 545
 Quirk, Daniel, 163
- Rabbit's Back Peak, 536
 Racial elements, 103-12, 231-2, 234, 240, 297
 Rackham, Horace, 424
 Raco, 557
 Radio stations, 234; Battle Creek, 192, 193; Bay City, 198; Detroit, 230, 244, 263, 270, 641; East Lansing, 328, 338, 339; Flint, 296; Fort Holmes, 622; Grand Rapids, 305, 311; Houghton Lake, 339; Kalamazoo, 321, Lansing, 328, 336; Lapeer, 440; Marquette, 343; Muskegon, 350; Paw Paw, 339
 Radisson, Pierre-Esprit, 374, 571, 573
 Railroads, xxi, 49-52, 56-7, 64, 106-7, 505, 635; ferries, 8, 381, 382, 540, 638; *see also headings of cities and tours*
 Rainbow Falls, 550
 Rainbow Trail, 444
 Rainy River, 483
 Raisin, River, 391, 461-2, 467, 508; Battle of, 461, 462, 623
 Ramsay, 549
 Randall, Prof. Harrison M., 183
 Ranney, George E., 338; Park, 338
 Rapid Motor Truck Company, 428
 Rapid River, 542
 Rat Gazette, 71
 Rathbone, Justus H., 585
 Rattle Run, 459
 Rattlesnake Island, 248
 Ravenna, 659
 Raymbault, Charles, 35
 Reading, 659
 Recollet, Baptiste, 352
 Red Cedar River, 329, 330, 339, 340, 419
 Red Keg, 430, 432
 Red Keggers, *The*, 147, 432
 Reed City, 423, 433, 512, 659
 Reed's Lake, 315
 Rees, George, 288
 Reese, 659
 Reforestation, 11, 21, 85, 487, 489, 492, 496; statistics, 85
 Refugees, 106, 213, 490; religious, 105
 Reid, Mrs. Carl, 501
 Relief, 641
 Religion, 89-92; *see also Churches and various denominations*
 Remember the Day, 150
 Reo, 79; Company, 337
 Republic, 546, 565; Mine, 638; Steel plant, 80
 Republic (barge), 129
 Republican party, 108, 505, 506, 637
 Rese, Bishop, 96
 Reuther, Walter R., 79
 Reutter, Mayor J. G., 332
 Review and Herald, *The*, 193, 194
 Revolutionary War, 39, 40, 41, 45, 187, 209, 235, 302, 374, 467, 616
 Rexford, 557
 Rexton, 539
 Rhind, J. Massey, 243, 356
 Ricci, Ulysses, 136
 Richard, Eugene, 262
 Richard, Father Gabriel, 45, 89-90, 92, 137, 138, 182, 214, 237, 245, 271, 393, 451, 632, 633, 634, 635; Park, 248
 Richards, Lewis, 340
 Richardson, Edgar P., ix
 Richardson, Henry Hobson, 168
 Richfield County Park, 441
 Richland, 659
 Richmond, 459, 659
 Richmondville, 457
 Richville, 444, 445
 Ridgeway, 459
 Rifle River, 488, 496
 Rindskof, Alexander, 326
 Ripley, 589

- River Rouge, 29, 212, 213, 215, 218, 221, 226, 227, 282, 399, 414, 436, 468, 634
 River Rouge (city), 466, 468-9, 655; *illus.* 214 f.; Park, 282
 Rivera, Diego, 141, 255
Riverman, The, 147, 311
 Riverview, 659
Rivière aux Ecorses, 469
Rivière des Morts, 344
 Rix Robinson Trading Post, 443
 Roberts, Capt. Charles, 618
 Roberts, Kenneth, 617
 Roberts Landing, 448, 451
 Robertson, Capt. Daniel, 624
 Robertson's Folly, 624
 Robinson Bay, 613
 Rochester, 479, 656
 Rock, 577
 Rock of Ages, 610
 Rock Harbor, 610, 614
 Rockford, 513, 659
 Rockland, 14, 63, 597, 598
 Rockwood, 659
 Rodeo, xxxvi
 Rogers, Biron, 431
 Rogers, Frank, 536
 Rogers, H. A., 494
 Rogers, Randolph, 138, 142, 184, 244
 Rogers, Maj. Robert, 37, 428, 618, 631
 Rogers City, 107, 483, 656
 Rogers Dam, 512
 Rogue River, 307, 513
 Rokita, Florian, 288
 Roland, Lake, 592
 Rolshoven, Julius, 139
 Roman Catholic Church, 32, 45, 89, 103, 420, 451, 630
 Romeo, xxxvi, 475, 477-8, 656
 Roni, Salvatore, 246
 Roosevelt, Franklin D., 241, 300
 Roosevelt Mountain Drive, 546
 Roscommon, 58, 84, 487, 488, 496-7, 659; County, 17
 Rose City, 659
 Rose Show, xxxv
 Rosebush, 498
 Roseville, 460, 656
 Rouge, River, *see* River Rouge
 Roumanian Orthodox Church, 400
 Round Island, 616, 624
 Round Lake, 392, 508, 519, 520
 Rourke, Constance, 150
 Rowe's Island, 404
 Royal Oak, 91, 140, 239, 424-5, 655
 Rudyard, 535, 538
 Rum Creek, 513
 Rummers Row, 469-70
 Rumrunning, 449, 469-70
 Rural Electrification Administration, 69, 476
 Rust, Ezra, 370
 Ruthenians, 110
 Ryerson, Martin A., 312, 353
 Saarinen, Eliel, 143, 171, 172, 437
 Sack Rider Hill, 400
 Sage, Henry W., 203; Library, 202
 Saghers, Hercules, 256
 Saginaw, 58, 61, 65, 107, 108, 163, 200, 203, 365-71, 375, 430, 444, 445, 446, 489, 490, 655, *illus.* 432 f.; map, 368, Bay, 15, 31, 119, 122, 132, 198-200, 203, 366, 454, 456, 488, 489; County, 65, 66, 105, 298, 367, 639; River, 4, 5, 11, 18, 61, 114, 198-9, 367, 454, 480; Trail, 28, 56, 423, 426, 429; Saginaw Treaty, 366, 634; Valley, 25, 51, 61, 65, 87, 146, 200, 366, 370, 455; lumbermen's strike, 639
 Saginaw Mine, 614
Saginaw Paul Bunyan, The, 146
 St. Cecilia Society, 152, 305, 312
 St. Charles, 446, 659
 St. Clair, General, 632
 St. Clair, 65, 168, 361, 448-50, 656; County, 66, 361, 362, 449-50, 637; Flats, 122, 449, 452, Lake, 131, 133, 217, 224, 251, 258, 264, 451-3, 463-4, 479, 629, *illus.* 120 ff., River, 5, 61, 114, 120, 359-64 *passim*, 449-53 *passim*, 633, 639, *illus.* 214 ff.; State Park, 364, 459
 St. Clair Railroad Tunnel, 360, 362
 St. Clair Shores, 655
 St. Dominic's Indian Mission, 406
 St. Felicité, 451
 St. Helen, 496
 St. Helena Island, 538
 St. Ignace, 35-6, 164, 380-83, 434, 481, 482, 537, 617, 629, 630, 656
 St. James, 602-9, 636
 St. Johns, 442, 500, 656
 St. Joseph, 57, 70, 204-10, 406, 530, 656; County, 409; River, 36, 59, 205, 206, 394, 397, 398, 408-12 *passim*, 630; Trail, 28, 56; Valley, 25
 St. Joseph's Island, 46, 618, 632
 St. Lawrence River, 18, 41, 115, 120, 130
 St. Louis, 444, 446, 499, 656
 St. Luson, Daumont de, 374, 376
 St. Martin, Alexis, 625

- St. Martin Bay, 536; Islands, 536, 622
 St. Mary's Canal and Locks, 372-3, 376, 378; River, Falls, and Rapids, 18, 24, 46, 50, 114, 372-4, 378, 551, 552, 556, 634
 Saline, 214, 219, 387, 390-91, 659
 Saline Valley Farms, 191, 227, 391
 Salt, 51, 65-6, 467-8, 471; derivatives, 430-31, 467, 471; geologic formation, 15, 16, 62, 467; localities, 8, 65, 430, 432, 449-51, 456, 467, 470, 490; mining, 65, 467; products, 467, 471; rank as industry, 8, 64; springs, 65, 432; value, 64, 65, 431; wells, 65, 431, 432, 450, 471, 637
 Salt Creek, 432
 Salzburg (village), 199
Samadhi, 148
 Sand, *see* Dunes
Sand Doctor, The, 147
 Sand Lake, 513, 659
 Sand Point, 572
 Sandburg, Carl, 151, 322, 407
 Sander, Prof. Henry A., 183
 Sandstone Falls, 550
 Sandusky, 444, 635, 659
 Sanilac County, 31, 444; Park, 457
 Sans Souci, 452
 Saranac, 659
 Sarett, Lew R., 151
 Sarkisian, Sarkis, 141
 Sarnia, 359, 360, 362, 642
 Saugatuck, xxv, 143, 528, 659
 Sauk Trail, 28
 Sault and Green Bay Trail, 28
 Sault Sainte Marie, 25, 34-5, 56, 103, 145, 159, 372-9, 535, 551-2, 556, 629, 631, 634, 655; canal and locks, 50, 63, 345, 372-3, 375, 376, 637, 638; Herring-Choker Jamboree, xxxiii; map, 377; Smelt Jamboree, xxxiv; Soo Locks, 642; Treaty, 46, 634; Winter Carnival, xxxiii; *illus.* 214 f.; *see also* St. Mary's River
 Sawauquette (Indian chief), 409
 Sawmill, *illus.* 620 f.
 Scarab Club, 138, 253, 259
 'Scattergood Baines,' 148
 Schack, August, 293
 Schlesinger, Ferdinand, 545
 Schoolcraft, Henry Rowe, 27, 145, 379, 571-2, 599
 Schoolcraft, 514-15, 659
 Schuch, John P., 370
 Schuster, Alexander, 340
 Schwartz, Rudolph, 247
Scorpion (warship), 618
 Scott, Hiram, 434
 Scott, Jim, 249
 Scott, John, & Co., 169, 243
 Scott's Cave, 617
 Scottville, 434, 525, 659
 Scripps, James E., 270
 Sears, Zelda, 163
 Sebewaing, 455, 659; River, 455
Second Growth, 150
 Secret Order of Patrons of Husbandry, 73
Seedtime and Harvest, 149
 Selden, George B., 217, 218
 Selfridge Field, 459
 Seligman, 'Little Jake,' 369
 Seney, 556, 559-61
 Sepeshy, Zoltan, 140, 143
 Seul Choix Pointe, 537
 Seven Mile Beach, 575
 Seventh Day Adventists, 91, 193-4, 490, 637
 Shafer, Chet, 409
 Shafter, Maj. Gen. William Rufus, 403
 Shakespearian Garden, 324
 Sharp, Ella, Park, 506
 Sharples Solvents Plant, 471
 Shaw, Anna Howard, 512
 Shaw, Wilfred B., ix
 Shaw Post Office, 483
 Shaw-Walker Company, 353
 Shelby, 526, 659
 Sheldon, John P., 71
 Shelldrake, 569
 Shephard, Esther, 146
 Shepherd, 659
 Shepley, Rutan and Coolidge, 170
 Sheridan, Gen. Philip, 373, 379
 Sheridan, 659
 Sherman Township, 397
 Sherwood, 659
 Shiawassee County, 420; River, 18, 441, 442
 Shingabaw (Indian chief), 486
 Shingleton, 562
 Shipbuilding, 68, 118, 201, 207, 215, 361, 451, 467, 468, 472, 636
 Shiperd, Rev. John, 501
 Shipping, 57, 113-14, 221-2, 344-5, 347, 366, 434, 531, 534, 540, 579, 585, 598, *illus.* 214 f.
 Shipwreck, 117, 122-3, 126, 457
 Shiras, George, III, 572
 Shoreham, 659
 Show-Boat Festival, 442
 Shrine Circus, xxxiii
 Shrine of the Little Flower, 295, 425-6
 Shurtleff House, 516
 Sibley, Mr. and Mrs. Solomon, 152, 258

- Sidnaw, 567
Signal of Liberty, 190
 Silver City, 600, 601
 Silver Falls, 596
 Silver Lake, 526; State Park, 358, 526
 Simmons, Stephen G., 245, 388
 Simon, Afrem, 288
 Simpson, Thomas Henry, 183
 Sinclair, Lt. Patrick, 450, 618, 624
 Sinclair Grove, 620, 624
 Sinkholes, 16, 485, 486, 493
 Siskiwit Bay, 610; Lake, 614
 Sitting Bull (Indian chief), 462
 Six Lakes, 447
 Skanee, 596
 Skiing, xxxiii, 533, 565, *illus.* 120 f.
 Skinner, R. Dana, 163
 Skull Cave, 621
 Slate River, 596
 Slavery, 48, 50, 108, 193, 402, 411, 633;
 see also Negroes and Underground
 Railroad
 Sleeper, Albert E., 476
 Sleeping Bear Sand Dune, 533, 534
 Sligh, Charles R., 310
 Sloan, Alfred P., 78
 Slocombe, George, 318
 Slocum, Elizabeth, 472; Slocum's Is-
 land, 472
 Slusser, Jean Paul, 140
 Small, P. J., 560
 Smelt, *illus.* 120 f.
 Smelt Festivals, xxxiv
 Smith, Elmer D., 507
 Smith, Jacob, 298
 Smith, Judson De Jonge, 139, 140
 Smith, Mortimer L., 270
 Smith, S. L., 337
 Smith, Samuel Francis, Memorial, 251
 Smith, Uriah, 58
 Smith, Hinchman, and Grylls, 171, 172,
 188, 287, 465
 Smith, Tanner, and Company, 457-8
 Smits, Lee J., 149
 Smitter, Wessel, 150
 Smooth Rock, 461
 Snakes, xxix
 Social Welfare, 89, 96-102, 240, 459,
 642
 Socialism, 235
 Socialist Community of Ora et Labora,
 203, 455-6
 Society for the Holland Emigration
 . . . , 317
 Sodus, Cherry Canning plant, *illus.*
 526 f.
 Sojourner Truth, 195-6
 Somerset, 393; Center, 393
Son of the Ages, 148
Song of Hiawatha, *see* *Hiawatha*
 'Soo,' *see* Sault Ste. Marie
 Soo Junction, 558
 Sorin, Father Edward, 409
 South Haven, 128, 515, 529, 656
 South Lyon, 659
 South Manitou Island, 122, 127, 532,
 533
 South Military Hill, 593
 South Range, 592, 659
 South Sallypoint, 625
 Southcott, Joanna, 207
 Sowerby, Leo, 156
 Soy beans, *see under* Agricultural
 products
 Spalding, 544
 Spanish-American War, 266, 326, 333,
 336, 497, 643
 Sparks, Joe, 139
 Sparks, William and Matilda, 506
 Sparta, 659
 Spas, 422, 446, 460, 501
 Speck, Walter, 139
 Speedboat racing, 450
 Spike Horn Creek Camp, 498
 Sports, xxix, xxx
 Spray Creek Cascade, 574
 Spring Arbor, 408
Spring Flight, 149
 Spring Lake, 422, 527, 657
 Springport, 659
 Springwells, 211, 213, 214, 215
 Springwells Filtration Plant and Pump-
 ing Station, 224
Squalus (submarine), 642
 Squaw Island, 602, 606
 Squier, Gen. George O., 477
 Stalwart, 552
 Stambaugh, 547, 659
 Standard Oil Refinery, 469
 Standish, 488, 659
 Stanley, J. M., 137
 Stanley, Jane C., 140
 Stanton, 659
 Stanwood, 659
 Starr, Floyd, 401; Starr Commonwealth,
 401
 State, *see* Michigan State
 State Pioneer Museum, 332
 State Prison of Southern Michigan, 504
 Stately Falls, 572
 Steamship passenger lines, xxi
 Stearns Collection of Musical Instru-
 ments, 188
 Steel, 239, 451, 467, 469, 470, 548, 638

- Steele, James, 150
 Stephens, Henry, 494-5
 Stephenson, 659
 Sterling, 659
 Stevens, James, 146
 Stevens, Capt. William H., 290
 Stevensville, 407, 660
 Stewart, W. F., 298
 Stockbridge, 660
 Stone, Lucinda Hinsdale, 326
 Stone Lake, 411
 Stony Island, 474
Story of Ab, 148
 Strang, 'King' James, 91, 603-5, 607, 609, 636, 637
 Stratton, Mary Chase, 141, 257, 266
 Strickland, Rev. G. D., 553
 Strikes, 299-300, 591, 636, 639, 640, 643; *see also* Labor
 Strongs, 557
 Stuffer Hill, 400
 Sturgeon Bay, 517
 Sturgeon Point, 486
 Sturgeon River, 492, 493, 567, 594
 Sturgis, 387, 396-7, 398, 410, 656
 Sudan Grass, *illus.* 526 f.
 Sugar beets, *see under* Agricultural products
 Sugar Island, 32, 375
 Sugar Loaf Mountain, 349, 564
 Sugar Loaf Rock, 617, 621, 622
 Sullivan's Landing, 570, 575
 Summerville, 447
 Sunfield, 660
 Sunken Lake, 485, 486
 Sunken treasure, 122
 Sunrise Co-operative Farm, 446
 Sunset Lake, 515
 Superior, Lake, 4, 14, 15, 25, 26, 30, 34, 35, 58, 63, 87, 120-23 *passim*, 128, 168, 344, 372, 375, 586, 598, 600, 610, 612, 613, 629, *illus.* 120 f. and 620 f.
Superior (vessel), 238, 472, 574
 Superstitions, 118
Surrey Family, The, 147
 Sutton's Bay, 147, 531, 660
 Swamps, *see* Marshes and swamps
 Swan Creek Indian Reservation, 453
 Swan Island, 248
 Swan, Dr. William F. G., 225
 Sweden, 106, 511
 'Sweet Singer of Old St. Joe, The,' 146
Sweet Singer of Michigan, The, 145
 Sweetland, James, 434
 Sycamore River, 329
 Sylvan Lake, 660
 Taft, Lorado, 507
 Taft, William Howard, 506
 Tag Alder Swamp, 445
 Tahquamenon River, 17, 18, 87, 558, 559, 569; Falls, 558, 569, *illus.* 620 f.; swamp, 557, 568
 Tamarack River, 513
 Tappan, Dr. Henry Philip, 94-5, 180, 182, 184
 Tashmoo Park, 364, 451, 452
 Tau Beta Community Center, 287
 Tawas Bay, 487, 488
 Tawas City, xxxiv, 487, 488, 660
 Tawas River, 487
 Taylor, Charlotte, 242
 Taylor, James, 322-3
 Taylor, Zachary, 402
 Tecumseh (Indian chief), 46, 467, 472
 Tecumseh (town), 167, 391, 656
 Tekonquasha (Indian chief), 502
 Tekonsha, 502, 660
 Telephone system, 600, 638
Temper, 150
Templeton (steamer), 122
 Thayer, Charles, 503, 504
 Theater, 157-63; Catholic Theater Arts Guild, 305, 311; Children's Theatre, 136; Civic Players: Detroit, 160, 161; Grand Rapids, 305, 311; Kalamazoo, 163, 323, 326; Lansing, 332; Contemporary Theatre, 161, 230; Detroit Federal Theatre, 136; Garrick Theater, Detroit, 160; Lithuanian Art Theater, 305, 311; Lydia Mendelssohn Theater, 163, 177, 178, 179, 190; May Theater Festival, xxxiv, 306; Mich. Repertory Players, 163; Power's Opera House, 158; Ramsdell Theater, 159
 Thomas, Allan F., 141
 Thomas, Dr. Nathan, 514
 Thomas, R. J., 80
 Thomas, Theodore, 152
 Thompson, Edward Hughes, 104
 Thompson, 541
 Thompson Lake, 418
 Thompsonville, 660
 Thomsonite Beach, 614
 Thornapple River, 402, 420, 442
 Thorpe, Rose Hartwick, 146
 Thread River, 430
 Three Cemeteries, 622
 Three Oaks, 412, 660
 Three Rivers, 398, 408, 409, 508, 515, 556
Three Stories and Ten Poems, 151
 Threshing, *illus.* 526 f.

- 'Thumb, The,' 110, 151, 442, 444, 454-76 *passim*
Thumb Electric Co-operative Station, 476
Thunder Bay, 123, 485, 486; Quarry, 485; River, 86, 480, 485, 486
Thunder Mountain, 210, 530
Thwing, Eugene, 147, 432
Tiepolo, 256
Tiffin, Edward, 238
Tigress (warship), 618
Tilton and Githins, 170
Tittabawassee River, 18, 430, 432
Titus, Harold, x, 147, 150
'To Be Negro in a Day Like This,' 146
Tobacco River, 498
Tobins Harbor, 610, 613, 614
Tocqueville, Alexis de, 87, 369
Todd, A. M., 142, 323, 326
Todd, John, 298
Todd Harbor, 614
Toivola, 592
Toledo, Ohio, 28, 239, 454, 461, 472
Toledo strip, 48-9, 461, 635
'Toledo War,' 461, 632, 635
Topinabee, 87, 492
Topography, 16-19
Torch Lake, 520, 521, 589
Torch River, 520
Torry, Fred, 293
Tourist industry, 10-11, 70, 87-8, 205, 207, 375, 456, 472, 481, 482, 488, 508, 597
Trade unions, *see* Labor
Transportation, 8, 55-8, 104, 298, 307, 310, 331, 351
Trap Range, 14
Travel, bibliography, 645-6
Travels and Adventures in Canada, 599
Traverse City, xxxv, 140, 154, 159, 515, 516, 521, 522-3, 530, 531, 655, *illus.* 526 f.; State Park, 521
Treaties: (1819), 203, 366, 371, 376; Detroit, 45, 457; Ghent, 618; Greenville, Ohio, 42; Paris, 37, 38, 374, 612, 618, 632
Treaty Stone, 474
Trentanove, Gaetano, 348
Trenton, 466, 467, 471, 472, 656
Trevellick, Richard F., 73
Trimountain, 592
Tromble, Joseph and Mader, 199, 203
Trombley, 577
Troupers of the Gold Coast, 150
Trout Creek, 567
Trout Festivals, xxxiv
Trout Island, 602, 608
Trout Lake, 536, 538
Trowbridge, S. V. R., 425
Truax, Maj. Caleb, 472
Truaxton, 472
Tubbs, Mrs. Ralph M., 418
Tulip Festival (*Tulpen Feest*), xxxiv, 317, 319
Tupper Lake, 420
Turner, H. H., 172
Turner, 660
Turning Wheel, The, 150, 262
Tuscola County, 445; *Pioneer Times*, 445
Tustin, 660
Tuttle Homestead, 597
Twin Falls Park, 546
Twin Rocks, 456
Twining, 660
Tyler, Moses Coit, 183
Ubly, 476, 660
Uncle Tom's Cabin, 402
Underground Railroad, 108, 193, 195, 239, 395, 401, 408, 410, 463, 514, 636
Unemployment, 5, 100, 240, 241; compensation, 101
Union, 399
Union City, 408, 660
Union Carbide Company, 379
Union Guardian Trust Co., 641
Unionville, 454, 455, 660
United Automobile Workers, 77-8, 80-81, 298, 299, 300, 642
United States Air Corps, 459, 486; Bureau of Fisheries, 453; Chamber of Commerce, 88; Coast Guard, xxxv, 357, 456, 483, 486, 520, 527, 606, 623, 625; Detention Farm, 491; flag first raised, 632; Forest Service, 62, 488, Indian Training Station, 568; Land Grant College Act, 94; Land Office, 298; Navy, 218, 474; Treasury Department, 474; War Department, 523, 599; Weather Bureau, 376
United States Gypsum Company, 469, 488
United States Rubber Company Plant, 267
University of Michigan, xxxv, 29, 45, 74, 85, 92-5, 137-40 *passim*, 142, 143, 147-51 *passim*, 171, 178-90 *passim*, 339, 401, 429, 455, 489, 634, 636, *illus.* 58 f. and 244 f.; biological station, xxxv, 482, 517; map, 185; play-production group, 163; Rackham Graduate School, 172; School of Music, 155

694 INDEX

- Upjohn, Dr. William E., 323, 326
 Upper Canadian Legislature, 236
 Upper Peninsula, xxxv, 3, 4, 7-9, 13-23 *passim*, 28, 30-32, 43, 49-50, 57, 61-2, 103-8 *passim*, 121, 145, 172, 343-9, 372-83, 462, 478, 481, 516, 543, 597, 611, 640; Development Bureau, 87-8; State Fair, 543
Upsurge, 149
 Utica, 475, 479, 660
Vagabond Journey Around the World, 148
 Valentiner, Dr. W. R., 141, 254
Valley of Silent Men, The, 147
 Van Buren County, 405
 Van Buren State Park, 210, 529-30
 Van Deusen, Dr. and Mrs. E. H., 326
 Van Dore, Wade, 149
 Van Dyke, James, 137
 Van Dyke, 480
 Van Ettan Lake, 486, 487
 Van Raalte, Dr. A. C., 105-6, 317, 318, 319, 636
 Van Tyne, Prof. Claude H., 183
 Van Wagener, Murray D., 643
 Vandalia, 410, 660
 Vander Luyster, Johannes, 443
 Vanderbilt, 493, 660
 Vassar, Matthew, 445
 Vassar, 445, 660
 Vehicles (collection), 304
 Venetian Night, xxxvi
 Vermontville, 500, 660
 Vernon, 660; oil and gas fields, 433
 Versailles Treaty (1763), 631
 Vertin, Bishop John, 348
 Veterans of Foreign Wars National Home, 501
 Vicksburg, 515, 660
 Victoria Dam, 598
 Viking Water Festival, xxxv
 Villerays, 381
Vinegar Tree, 323
 Virginia, 40, 41, 180
 Visiting Nurses Association, 287
 Visual Education Museum, 288
 Von Platen-Fox County Park, 548
Voree Herald, 604
 Voters, registered (1940), 643
Voyageurs, 28, 34-5, 103-4, 113, 376, 477, 481, 617-19
 Vriesland, 316
 V'soske, Stanislav, 140
 Vulcan, 545
 Wadlow, Robert P., 643
 Wagley, Capt. John, 516
 Wabbekeanness, Lake, 523
 Wabhemme (Indian chief), 398
 Wahjamega, 99
 Waikaka Bay, 556; River, 556
 Wakefield, 547, 549, 556, 564, 567, 656
 Walden Lake, 491; Woods, 491
 Waldron, Col. Sidney D., 423
 Waldron, Webb, 147
 Waldron, 660
Walk-in-the-Water (steamboat), 472, 634
 Walker, Jonathan, 357
 Walker, Mildred, 149
 Walker Tavern, 392
 Walkerville, 660
 Walkerville and Detroit Ferry Company, 229, 242
 Walled Lake, 415
 Walloon Lake, 509
 Walpole Island, 451-2
 Walsh, 561
Walter H Oads (schooner), 118
 Walton, Prof. Ivan H., ix
 Wampers Lake, 392
 War of 1812, 26, 45, 47, 56, 90, 104, 213, 237, 374, 427, 461, 462, 467, 469, 471, 473, 553, 618, 622, 633
 War Relic Museum, 333
 Ward, Capt. Eber B., 470
 Ward, Montgomery, 411
 Warner, Gov. Fred M., 58
 Warren, 660; dunes, 210, 407; Woods, 412
 Washington, George, 235, 258
 Washington, Mich., 478-9
 Washington, Booker T., Trade Association, 109
 Washington Harbor, 610, 614
 Washtenaw County, 17, 105
 Water Regatta, xxxv, 579
 Waterford, 430
 Waterford Hill, 430
 Waterloo, Stanley, 148
 Waterloo, 400; Marsh, 400
 Watersmeet, 547, 548, 581, 593
 Watervliet, 406, 660
 Watson, James Craig, 183
 Watton, 567
 Wayland, 513, 660
 Wayne, Gen. Anthony, 42, 43, 236, 243, 271, 283, 388, 632
 Wayne, 245, 388, 656
 Wayne County, 43, 108, 110, 245, 283, 388, 400, 632; Bldg., 243; Medical Society, 274; park system, 467; poorhouse, 97; training school, 99, 400
 Weather: changes, 20; conditions, 19-

- 20, 113, 115; lore, 116-18; towers, 607, 609; bibliography, 646
- Webberville, 660
- Webster, Daniel, 392
- Webster-Ashburton Treaty, 612
- We Explore the Great Lakes*, 147
- Weikamp, Father, 516
- Weinman, Adolph Alexander, 247
- Welland Canal, 114, 130
- Wells, Hezekiah, 514
- Wells State Park, 578
- Wenona (village), 199
- Wenzell, A. B., 139
- Wesley, John, 163, 494
- West, Bina, *see* Miller, Bina West
- West Bay City, 200, 203
- West Branch, xxxiv, 496, 660
- West Dearborn, 212
- West Michigan Development Bureau, 88
- West Michigan Tourist and Resort Association, 88
- West Shore Music Festival, xxxiv
- Western Clearings*, 145
- Western Federation of Miners, 76, 640
- Western Health Reform Institute, 194
- Westmoreland* (steamer), 122
- Westphalia, 420, 660
- Westward, 608
- Wexford County, 17
- W. H. Gölcher* (steamer), 127
- Whipping Post, 607
- Whiskey Island, 602
- White, Edna Noble, 259
- White, Helene Maynard, 141
- White, James, 193, 637
- White, Peter, 347
- White, Stewart Edward, 147, 311, 313
- White, T. Stewart, 313
- White, Thomas Gilbert, 140
- White Cloud, 660
- White Lake, 526-7
- White Pigeon, 387, 398, 660
- White Rock, 457
- Whitefish Bay, 373, 557, 558, 568, 569
- Whitefish Point, 122, 568, 570
- Whitehall, 527, 660
- Whitehead & Kales Plant, 469
- Whitmore Lake, 191, 491
- Whittemore, 660
- Why Keep Them Alive?*, 98, 150
- Wicker, John P., 139, 141
- Widdicombe, George, 310
- Wilby, Ernest, 188, 270
- Wild Fowl Bay, 455
- Wild life, 22-3, 400, 440, 487, 526, 597, 611
- Wilderness State Park, 516
- Wiley, Frederick J., 257
- William Shupe* (schooner), 128
- Williams, Elizabeth Whitney, 606
- Williams, Mildred, 293
- Williamston, 419, 660
- Wills, Harold C., 643
- Wills-St. Clair Company, 449-50
- Wilson, Mrs. Matilda, 643
- Wilson, William B., 77
- Wilson State Park, 498
- Wilson-Harris Community, 32
- Winchell, Alexander, 499; Collection, 499
- Winter Sports Carnival, xxxiii, 306, 376
- Wintergreen Lake, 404
- Winters, Ezra, 140
- Wisconsin, 8, 30, 49, 115, 465-6, 636
- Wishart, Alfred Wesley, 312
- Wishing Springs, 623
- Wisner, 454
- Wissakodi Country, 567
- Witherell, B. F. H., 290
- Witherell, Judge James, 45, 280
- Withington, Gen. William, 507
- Wixom, Frank, 432
- Wolf Lake, 400; fish hatchery, 327, 514; road, 400
- Wolverine (nickname), 23, 214
- Wolverine (town), 493, 660
- Wolverine Chair Company, 310
- Woman's Benefit Association, 362, 459, 639
- Wood, Garfield Arthur (Gar), 252, 450, 451
- Wood, John R., 550
- Wood, Junius, Jr., 318
- Woodbridge, William, 93, 182, 258, 634
- Wooden shoes (*klompen*), 317, 320
- Woodland, 660
- Woodrow Wilson and World Settlement*, 148
- Woodson, Carter G., 297
- Woodward, Judge Augustus B., 44, 93, 173, 182, 237, 290, 389, 423-4
- Woodward Superhighway, 423
- Wool, 8, 59, 400
- Woolson, Constance Fenimore, 145, 624
- Woodworth, 'Uncle Ben,' 245
- Worcester, 345
- Works Progress Administration and Work Projects Administration, 136, 144, 153, 248, 266, 288, 293, 319, 339, 433, 459, 622
- World War I, 9, 10, 76, 77, 105, 108, 181, 218, 266, 271, 275, 333, 339, 340, 361, 403, 407, 415, 421, 425, 431, 456, 459, 496

696 INDEX

- World's Columbian Exposition, Chi-
 cago, 169
 Wright, Frank Lloyd, 172, 431
 Wright Players, 159
 Writers' Conference, 151
 Wronski, Thaddeus, 153
 Wyandotte, 466, 470-71, 655
 Wyoming, 584

 Yaeger, Edgar Louis, 139, 144, 267
 Yale, 439, 660
 Yarns, sailors', 119-23
 Yellow Dog River, 597
 York, Dr. Francis, 154
Yosemite (U.S.S.), 266

 Young, Roy, 477
 Young, Mrs. Sara Davidson, 203
 Young Men's Christian Association, 109,
 184, 247, 487
 Young Women's Christian Association,
 109, 184, 407
 Ypsilanti, Gen. Demetrios, 389
 Ypsilanti, xxxiv, xxxv, 71, 144, 162, 166,
 213, 214, 219, 239, 387, 388-90, 655;
illus. 432 f.

 Zacharian, Chandler, 637
 Zeba, 595
 Zeeland, 106, 150, 316, 318, 443-4, 656
 Zug Island, 468

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